

	DALLAS FORT WORTH HOUST	NR, INC. ITAL AND MATERIALS ENGINEER FON LONGVIEW LUBBOCK AUSTIN 9 Phone:972-488-8800 Fax: 972-488-808		
	CONCRETE INSPECTION AN	D COMPRESSION TEST REPORT		id
CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 9/14/99 DC98-050-138	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, F Town of Addison - James Pierce, P.E Town of Addison - Dave Wilde		
SPEC	IFICATIONS	PROJECT	DATA	
Strength (psi): Slump (in.): Air Content (%): Concrete Temp (°F)	na na 4 -6 95	Placement Date: Sampled By: Weather: Supplier/Mix:	6/28/99 Contractor Sunny na	
			110	
		DATA SET #1		
Ticket #: Slump (in.); Conc. Temp. (°F): Placement Location Remarks:	Air Conten Air Conten Ambient Temp. (°F		······································	
	FIELD D	DATA SET #2		
Ticket #: Slump (in.): Conc. Temp. (°F): Placement Location: Remarks:	Time Batcher Air Conten Ambient Temp. (°F	d: Time Sampled: it: Unit Weight (pcf):		
		ESSION TEST RESULTS		

	C	TLINUEKS MU	LUEU ANU GUR	CED PER AS IM C31	, IESTED PER AS	IM C39, CAPPED	INFK	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
	AR062801 AR062802 AR062803	8/19/99 8/19/99 8/19/99	52 52 52	145660 138340 133930	28.27 28.27 28.27	5150 4890 4740	บ บ บ	

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE. (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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		TERRA-MAR	R, INC.			
	GEOTECHNICAL E	VIRONMENT	AL AND MA	ATERIALS ENGINEER	S	
	DALLAS FORT WO	RTH HOUSTO	N LONGVIE	EW LUBBOCK AUSTIN		
	11050 Ables Lane, Dalla	s, Texas 75229	Phone:972-4	88-8800 Fax: 972-488-808	0	
						id
	CONCRETE INSP	'ECTION AND	COMPRES	SION TEST REPORT		
NT:	Ed Bell Construction		REPORT DIS			
KOJECT:	Arapaho Road Improv	ements		struction - Doug Teter		
REPORT DATE:	08/25/99			, Inc. Kenneth Roberts, P		
TMI REPORT #:	DC98-050-137			lison - James Pierce, P.E lison - Dave Wilde		
SPECI	FICATIONS			PROJECT	DATA	
Strength (psi):	3000	_		Placement Date:	07/27/99	
Slump (in.):	5	-		Sampled By:	Pete W.	
Air Content (%):	·····			Weather:	Clear	
Concrete Temp (°F)	······	-		Supplier/Mix:	Lattimore	
		FIELD DA	TA SET #1			
Ticket #:	3088739	Time Batched:	1:53	Time Sampled:	3:15	
Slump (in.):	4 1/4	Air Content:	3.4	Unit Weight (pcf):		
Conc. Temp. (°F):	97 Aml	bient Temp. (°F):	95	Yardage (c.y.):		
Placement Location:	Sidewalk-S. bound on	Spectrum, in fr	ont of buildin			*******
Remarks:						
			TA SET #2			
Ticket #:		Time Batched:		Time Sampled: Unit Weight (pcf):		
Slump (in.):		Air Content:		_ Unit Weight (pcf):		
Conc. Temp. (°F):		pient Temp. (°F):		Yardage (c.y.):		
Placement Location: Remarks:						
Reindiks.						
	CONC	RETE COMPRES	SSION TEST	RESULTS		

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	c	YLINDERS MC	DLDED AND CUP	RED PER ASTM C31,	, TESTED PER AS	TM C39, CAPPED	PER	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	AR072701	08/03/99	7	91340	28.27	3230	U	
	AR072702	08/24/99	28	115870	28.27	4100	U	
	AR072703	08/24/99	28	107500	28.27	3800	U	
	AR072704	08/24/99						
		discard						
								,

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Constru Arapaho Road I 8/20/99 DC98-050-136		Huitt-Zollars, Town of Add	TRIBUTION: struction - Doug Teter , Inc. Kenneth Roberts, P lison - James Pierce, P.E lison - Dave Wilde	
SPECI	FICATIONS			PROJECT	DATA
Strength (psi):	3000			Placement Date:	7/21/99
Slump (in.):	5			Sampled By:	T <u>Risen</u>
Air Content (%):	3-6			Weather:	Clear
Concrete Temp (°F)	100			Supplier/Mix:	TXI
		FIELD DA	TA SET #1		
Ticket #:	1367789	Time Batched:	12:15	Time Sampled:	1:10
Slump (in.):	5	Air Content:	4.7	Unit Weight (pcf):	na
Conc. Temp. (°F):	93	Ambient Temp. (°F):	95	Yardage (c.y.):	Jan-00
Placement Location:	Sidewalks on co	orner of Arapaho Rd 8	Arapaho & S	Spectrum	
Remarks:					
		FIELD DA	TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):			*****		
• • •		Ambient Temp. (°F):		Yardage (c.y.):	

rtemarks.	·····	······································			
Slump (in.): Conc. Temp. (°F): Placement Location: Remarks: Ticket #:	5 93 Sidewalks on co	Air Content: Ambient Temp. (°F): orner of Arapaho Rd & FIELD DA	4.7 95 Arapaho & S TA SET #2	Unit Weight (pcf): Yardage (c.y.): Spectrum	na Jan-00

			CONC	RETE COMPRE		ESULTS		
	c	YLINDERS MC	DLOED AND CUP	RED PER ASTM C31,	TESTED PER AS	TM C39, CAPPED	PER	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	AR072101	7/28/99	7	93600	28.27	3310	U	
	AR072102	8/18/99	28	131775	28.27	4660	U	
	AR072103	8/18/99	28	128471	28.27	4540	U	
	AR072104	Discard						

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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		GEOTEC	HNICAL EN	VIRONMENT	AL AND MA	TERIALS E	NGI	NEEF	RS	
		DALLAS	FORT WO	RTH HOUSTC	N LONGVIE	W LUBBOC	κA	USTIN	V	
		11050 Able	s Lane, Dalla	s, Texas 75229	Phone:972-48	88-8800 Fax: 9	72-4	88-80	80	
										id
		CONCR	ETE INSP	PECTION AND	COMPRES	SION TEST	REF	ORT	•	
CLIE	NT:	Ed Bell Co	onstruction		REPORT DIS	TRIBUTION:				
PRO	JECT:		Road Improv	ements		truction - Dou				
	ORT DATE:	8/6/99				Inc. Kenneth				
TMI	REPORT #:	DC98-050	-137			ison - James			E.	
					I OWN OF Add	ison - Dave V				
		IFICATIONS						OJEC	T DATA	
	ngth (psi):			-		Placement Da	ite:		7/27/99	
	p (in.):	5		-		Sampled By:			Pete W.	
	ontent (%):			_		Weather:			Clear	
Conc	rete Temp (°F)			-		Supplier/Mix:			Lattimore	
				FIELD DA	TA SET #1					
Ticke	:t #:	3088739		Time Batched:	1:53	Time	Sam	pled:	3:15	
Slum	p (in.):	4 1/4	-	Air Content:	3.4	- Unit Wei	ight ((pcf):	na	
	. Temp. (°F):	97	Amł	bient Temp. (°F):	95	- Yarda	ige (c.y.):	10 of 10 c.y	r_
Place	ment Location	: Sidewalk-S	5. bound on	Spectrum, in fr	ont of building]				
Rema	arks:									
					TA SET #2					
Ticke	۰t #۰			Time Batched:		Time	Sam	nled		
	p (in.):		-	Air Content:						
	. Temp. (°F):		- Amt	bient Temp. (°F):		Yarda	ige (c.y.):		
	ment Location:	*	•	, , , ,		**	~ ·			
Rema	arks:									
									· · · · · · · · · · · · · · · · · · ·	
Set #			n	RED PER ASTM C31	***************************************		******		lotes	
<u> </u>	1	1	7	1		1			10(03	****
1	AR072701	8/3/99		91340	28.27	3230	U			
	AR072702	8/24/99	28							
	AR072703	8/24/99	28							-

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE. (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

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(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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8/24/99

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TERRA-MAR,	INC.	

DALLAS	FORT WORTH	HOUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Co Arapaho R 7/30/99 DC98-050-	oad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Huitt-Zollars, Inc Kenneth I Town of Addison - James Pic Town of Addison - Dave Wild	Roberts, P.E. erce, P.E.
SPECIFI	CATIONS			PRO	JECT DATA
Strength (psi):	650/28			Placement Date:	6/24/99
Slump (in.):	5			Sampled By:	Moe II
Air Content (%):				Weather:	CW
Concrete Temp (°F)	90			Supplier/Mix:	Lattimore/42
		FIEL	D DATA SI	ET #1	
Ticket #:	6100633	Time Batched:	11:50	_ Time Sampled: _	12:05
Slump (in.):	5	Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	90	Ambient Temp. (°F);	95	Yardage (c.y.):	60/100
Sample Location:	(Arapaho F	Road) Right side 16+9	8 concrete	pavement	
Remarks:					
		FIEL	D DATA SI	ET #2	
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		Ambient Temp, (°F);			
Placement Location:					
Sample Location:					

Set #	Beam #	Test Date	Age (Days)	Max. Load (Ibs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
1	AR062401 AR062402	7/1/99 7/22/99	7 28	7680 8280	6,00 6.00	6.30 6.10	640 690	

	N LENGTH OF 18			ABOVE	*****			

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Impro 7/26/99 DC98-050-132		Ed Bell Con Huitt-Zollars Town of Add	STRIBUTION: Istruction - Doug Teter 5, Inc. Kenneth Roberts, I dison - James Pierce, P. dison - Dave Wilde	
SPECI	FICATIONS			PROJEC	Γ DATA
Strength (psi):	3000			Placement Date:	6/24/99
Slump (in.):	4			Sampled By:	Moe II
Air Content (%):				Weather:	Sunny/Warm
Concrete Temp (°F)	90			Supplier/Mix:	TXI/9601
		FIELD DA	TA SET #1		
Ticket #:	1346688	Time Batched:	12:40	Time Sampled:	12:50
Slump (in.):	4	Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	<u>90</u> An	nbient Temp. (°F):	95	Yardage (c.y.):	
Placement Location:	(Arapaho Road) left s	sidewalk station	63+50	_	
Remarks:					
			TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		nbient Temp. (°F):		Yardage (c.y.):	****
Placement Location:					
Remarks:	BARAAAAAAA				
					,

			CONC	RETE COMPRE	SSION TEST R	ESULTS		
	c	YLINDERS MC	DLDED AND CUP	RED PER ASTM C31	TESTED PER AS	TM C39, CAPPED	PER	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max, Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
	AR062401	7/1/99	7	121410	28.27	4290	U	
1	AR062402	7/22/99	28	152120	28.27	5380	υ	
	AR062403	7/22/99	28	151330	28.27	5350	U	
	AR062404	Discard						
	:							
			•					

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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	GEOTECHNICAL	ENVIRONMENT	AL AND M	ATERIALS ENGINEERS		
	DALLAS FORTV					
	11050 Ables Lane, Da	allas, Texas 75229	Phone:972-4	488-8800 Fax: 972-488-8080		
			CONDOC	SION TEST REPORT		id
	CONCRETE IN	SPECTION AND	COMPRES	SION TEST REPORT		
CLIENT:	Ed Bell Constructio	ท	REPORT DIS	STRIBUTION:		
PROJECT:	Arapaho Road Imp	rovements		struction - Doug Teter		
REPORT DATE:	07/29/99	Huitt-Zollars, Inc. Kenneth Roberts, P.E.				
TMI REPORT #:	DC98-050-136			dison - James Pierce, P.E. dison - Dave Wilde		
00501	FICATIONS		Town of Au	PROJECT I		
	3000			PROJECT L Placement Date:	07/21/99	
Strength (psi):	5			Sampled By:	T Risen	
Slump (in.): Air Content (%):	3-6	*****		Weather:	Clear	
Concrete Temp (°F)	100	**********		Supplier/Mix:	TXI	
	100				170	
		FIELD DA	TA SET #1			
Ticket #:	1367789	Time Batched:		Time Sampled:	1:10	
Slump (in.):	5	Air Content:		Unit Weight (pcf):	na	
Conc. Temp. (°F):		Ambient Temp. (*F):		Yardage (c.y.):	Jan-00	
Placement Location:	Sidewalks on come	er of Arapaho Rd &	Arapaho &	Spectrum		
Remarks:						
		FIELD DA	TA SET #2			
Ticket #:		Time Batched:		Time Sampled:		
Slump (in.):		Air Content:		Unit Weight (pcf):		
Conc. Temp. (°F):		\mbient Temp. (°F):		Yardage (c.y.):		
Placement Location:			*****			
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS									
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617									
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
1	AR072101	07/28/99	7	93600	28.27	3310	U			
	AR072102	08/18/99	28							
	AR072103		28							
	AR072104		hoid							
L										

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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	TERRA-MAR, INC. GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080								.
		CONCR		ECTION AND	COMPRES	SION TEST	REF	PORT	Ċb
REP	NT: JECT: ORT DATE: REPORT #:	Ed Bell Co Arapaho F 7/21/99 DC98-050	Road Improv	ements	Huitt-Zollars, Town of Addi	TRIBUTION: truction - Dou Inc. Kenneth ison - James ison - Dave W	Řot Pier	oerts, P.E ce, P.E.	
	SPECI	FICATIONS					PR	OJECT D	АТА
	igth (psi):	3600		-		Placement Da	ite:		6/23/99
	p (in.):	4		-		Sampled By:			R. Shaheed
	ontent (%): rete Temp (°F)			-		Weather:			Partly Cloudy TXI/9601
Conc	iele remp (F)					Supplier/Mix:			1/1/9001
					TA SET #1		_		(
Ticke		<u>1183575</u> 5.25	-	Time Batched:		Time Sampled:			4:05
	p (in.): . Temp. (°F):	<u> </u>	- Amh	Air Content: bient Temp. (°F):		Unit Weight (pcf): _ Yardage (c.y.):			10 yds
	cement Location; Sidewalk 1/2 W. on Arapaho 50ft from fire department hydrant E. block					10 yus			
				FIELD DA	TA SET #2				
Ticke			-	Time Batched:	*			pled:	
	p (in.):		- A	Air Content:				pcf):	
	. Temp. (°F); ment Location:		- · AHI,	pient Temp. (°F):		- Talua	ye (i	с, у .ј:	
Rema									
			CONC		SSION TEST P	ESULTS			
	c	YLINDERS MO		RED PER ASTM C31			PER	ASTM C617	
Set #		Test Date		Max. Load (lbs)		Strength (psi)		Note	YS
	AR062301	6/30/99	7	108050	28.27	3820	U		
1	AR062302	6/30/99	7	113060	28.27	4000	υ		:
	AR062303	7/21/99	28	131660	28.27	4660	υ		
	AR062304	7/21/99	28	132480	28.27	4690	υ		
	AR062305	Discard							
[

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE. (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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GEOTECH	INICAL ENVIRO	ONMENTAL	AND MATER	RIALS ENGINEERS			
DALLAS	FORT WORTH	HOUSTON	LONGVIEW	LUBBOCK AUSTIN			

FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - I
REPORT DATI	E: 07/02/99	Huitt-Zollars, Inc Ken
TMI REPORT #	t: DC98-050-133	Town of Addison - Jam

N: Doug Teter

neth Roberts, P.E. les Pierce, P.E. Town of Addison - Dave Wilde

SPECIFI	CATIONS		•••	PROJE	ECT DATA
Strength (psi):	650			Placement Date:	06/24/99
Slump (in.):	5			Sampled By:	Moe II
Air Content (%):				Weather:	CW
Concrete Temp (°F)	90			Supplier/Mix:	Lattimore/42
	x	FIEL	D DATA SET #1		*****
Ticket #:	6100633	Time Batched:	11:50	Time Sampled:	12:05
Slump (in.):	5	Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	90	Ambient Temp. (°F):	95	Yardage (c.y.):	60/100
Sample Location:	(Arapaho F	Road) Right side 16+9	8 concrete pav	ement	
Remarks:	••••••••••••••••••••••••••••••••••••••				
		FIEL	D DATA SET #2	2	
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		Ambient Temp, (°F):		Yardage (c.y.):	
Placement Location:					
Sample Location:					

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes		
1	AR062401 AR062402	07/01/99 07/22/99	7 28	7680	6.00	6.30	640			
							,			

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Jun TERRA-MAR, INC.

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		I ERRA-MAR	, INC.				
	GEOTECHNI	CAL ENVIRONMENT	AL AND MA	ATERIALS ENGINEER	S		
	DALLAS FO	ORT WORTH HOUSTO	N LONGVIE	EW LUBBOCK AUSTIN	,		
	11050 Ables La	ne, Dallas, Texas 75229	Phone:972-4	88-8800 Fax: 972-488-808	10		
					cb		
	CONCRET	E INSPECTION AND	COMPRES	SION TEST REPORT			
CLIENT:	Ed Bell Const	ruction	REPORT DIS	TRIBUTION:			
PROJECT:	ROJECT: Arapaho Road Improvements			struction - Doug Teter			
REPORT DATE:	07/02/99		Huitt-Zollars, Inc. Kenneth Roberts, P.E.				
TMI REPORT #:	DC98-050-132	2	Town of Addison - James Pierce, P.E.				
			Town of Add	dison - Dave Wilde			
SPEC	IFICATIONS			PROJECT	DATA		
Strength (psi):				Placement Date:	06/24/99		
Slump (in.):	4			Sampled By:	Moe II		
Air Content (%):				Weather:	Sunny/Warm		
Concrete Temp (°F) 90			Supplier/Mix:	TXI/9601		
		FIELD DA	TA SET #1				
Ticket #:	1346688	Time Batched:	12:40	Time Sampled:	12:50		
Slump (in.):	4	Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):	90	Ambient Temp. (°F):	95	Yardage (c.y.):	10 yds		

FIELD DATA SET #2							
Ticket #:	Time Batched:	Time Sampled:					
Slump (in.):	Air Content:	Unit Weight (pcf):					
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):					
Placement Location:							
Remarks:							

	CONCRETE COMPRESSION TEST RESULTS									
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617									
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
	AR062401	07/01/99	7	121410	28.27	4290	U			
1	AR062402	07/22/99	28							
	AR062403	07/22/99	28							
	AR062404		Hold							
								Ļ		

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

Placement Location: (Arapaho Road) left sidewalk station 63+50

Remarks:

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jurry L. France TERRA-MAR, Inc.

	-	DALLAS	FORT WOP	TERRA-MAR VIRONMENT RTH HOUSTO 3, Texas 75229	AL AND MA	W LUBBOC	к А	USTIN	
		CONCR	ETE INSP	ECTION AND	COMPRES		REP	ORT	
PRO. REPO	CLIENT:Ed Bell ConstructionREPORT DISTRIBUTION:PROJECT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterREPORT DATE:7/16/99Huitt-Zollars, Inc. Kenneth Roberts, P.E.TMI REPORT #:DC98-050-128Town of Addison - James Pierce, P.E.Town of Addison - Dave WildeTown of Addison - Dave Wilde								
	SPECI	FICATIONS					PR	OJECT	DATA
Stren	gth (psi):	3500		_		Placement Da	ite:		6/18/99
Slum	p (in.):	4		_		Sampled By:			J. Tipton
Air Content (%): 4 to 6				_		Weather:			Partly Cloudy
Concrete Temp (°F) 95 Supplier/Mix:									
	-			FIELD DA	TA SET #1				
Ticke	t #:	1342402 Time Batched:			11:38	Time	Samı	pled:	12:25
Slum	o (in.):	3 3/4	-	Air Content:		Unit Weight (pcf):			
	Temp. (°F):	85	- Amt	vient Temp. (°F):					10 yds
		NW corne		ion of Arapaho					
			V. of Dallas						
				FIELD DA	TA SET #2				
Ticke	t #:			Time Batched:		Time S	Samj	oled:	
Slum	o (in.):			Air Content:		Unit Wei	ght (pcf):	
	Temp. (*F):		Amb	ient Temp. (°F):		Yarda	ge (o	c.y.):	
	ment Location:								
Rema	irks:								
			CONCI	RETE COMPRES	SSION TEST R	ESULTS			
	c	YLINDERS MO	LDED AND CUF	ED PER ASTM C31,	TESTED PER AST	TM C39, CAPPED	PER A	ASTM C61	7
Set #									
1	AR061801	6/25/99	7	104350	28.27	3690	υ		
	AR061802	6/25/99	7	90360	28.27	3200	U		

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE. (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

28

28

138020

134770

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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7/16/99

7/16/99

AR061803

AR061804

Jussy For For For TERRA-MAR, Inc.

4880

4770

28.27

28.27

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TERRA-MAR, INC. GEOTECHNICAL, ENVIRONMENTAL, AND CONSTRUCTION MATERIALS TESTING Dallas Fort Worth Houston Lubbock Longview Austin 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

DAILY ACTIVITY OBSERVATION REPORT

CLIENT: Ed Bell Construction PROJECT: Arapaho Road Improvements PROJECT NO.: DC98-050-135 REPORT DATE: 6/29/99

DISTRIBUTION:

Ed Bell Construction – Doug Teter Huitt Zollars, Inc. – Kenneth Roberts, P.E.-Town of Addison – James Pierce, P.E. Town of Addison – Dave Wilde

On June 28, 1999, Terra-Mar, Inc. representative, Billy Robinson, was at the above referenced project to perform concrete inspection and testing on one set of cylinders. TMI representative arrived at project site at 11:35. The truck was already empty and the technician waited for another truck for a sample. Left the site at 12:46 and returned to the office.

C. For "

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				TERRA-MAR	₹, INC .				
		GEOTEC	HNICAL EN	VIRONMENT	AL AND MA	TERIALS E	NGI	NEERS	
		DALLAS	FORT WOP	RTH HOUSTO	N LONGVIE	W LUBBOC	ĸΑ	USTIN	
		11050 Able	s Lane, Dalla:	s, Texas 75229	Phone:972-48	38-8800 Fax: 9	72-4	88-8080	
									cb
		CONCR	LETE INSP	ECTION AND	COMPRES	SION TEST	REP	ORT	
CLIE	NT:	Ed Bell Co	onstruction		REPORT DIS	TRIBUTION:			
	JECT:	•	Road Improv	ements		struction - Dou			
	ORT DATE:				•	Inc. Kenneth		•	
TMI F	REPORT #:	DC98-050	-130			ison - James			
	CDECI				10WIT OF AUU	ison - Dave W			
Ctrop		IFICATIONS 3600				Placement Da		OJECT DA	06/23/99
	gth (psi): p (in.):	-		*		Sampled By:	lle.	******************	R. Shaheed
	p (m.): ontent (%):		••••••••••••••••••••••••••••••••••••••	**		Weather:		***************************************	Partly Cloudy
	rete Temp (°F)			MM:		Supplier/Mix:			TXI/9601
				N .		Oupprocrams.			
					TA SET #1				
Ticke		1183575	-	Time Batched:		**		oled:	4:05
	p (in.):	5.25		Air Content:		_ Unit Wei	-		
	. Temp. (°F);	95	-	pient Temp. (°F):	///////////////////////////////////////			:.y,):	10 yds
Place	ment Location:	Sidewalk	1/2 W. on Ar	apaho 50ft fron	n fire departm	ent hydrant E	. blo	ck	
					TA SET #2				
Ticke			-	Time Batched:	www.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a	Time \$	Samp	oled:	
	p (in.):	·	- Ā	Air Content:				pcf):	
	. Temp. (°F):		- Amo	pient Temp. (°F):		- Yarda	ge (c	».y.):	
Rema	ment Location:								
INVIIIU	uno.								
		·····							
			CONCI	RETE COMPRES	SSION TEST R	RESULTS			
				RED PER ASTM C31					
Set #				Max. Load (lbs)				Notes	
	AR062301	06/30/99	7	108050	28.27	3820	U		
1	AR062302	06/30/99	7	113060	28.27	4000	υ		
	AR062303	07/21/99	28						
	AR062304	07/21/99	28						
	AR062305		Hold						

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Surry Ling, Har TERRA-MAR, Inc.

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TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: Ed Bell Construction PROJECT: Arapaho Road Improvement REPORT DATE: 06/16/99 TMI REPORT #: DC98-050-126				ements	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde					
	SPECI	FICATIONS					PRO	JECT DA	TA	
Stren	gth (psi);	4000				Placement Da	ate:		05/19/	99
Slum	o (in.):	4		_		Sampled By:			Moe	!!
Air Co	ontent (%):	ла		-		Weather:		V	Vindy/ S	Sunny
Conci	rete Temp (°F)	95		-		Supplier/Mix:		[_attimor	e/42
				FIELD DA	TA SET #1					
Ticke	t#:	6098024		Time Batched:	11:40	Time	Sample	ed:	11:5	0
Slum	o (in.):	2	•	Air Content:	na		•	cf):		
-	Temp. (°F):	75	Amt	ient Temp. (°F):	85			y.):	10 7	0
Place	ment Location:	Driveway I	eft 60+32.18	3		-				
Rema	irks:									
				FIELD DA	TA SET #2					
Tickel	t#:			Time Batched:		Time	Sample	ed:		
Slump	o (in.):		Air Contont			it: Unit Weight (pcf):				
	Temp. (°F):			ient Temp. (°F):	:Yardage (c.y.):			y.):		
	ment Location:									
Rema	irks:									
******			CONC	RETE COMPRES	SSION TEST R	ESULTS				
	c	YLINDERS MO		RED PER ASTM C31	TESTED PER AS	TM C39. CAPPED	PER AS	TM C617		
Set #	Cylinder #			Max. Load (lbs)				Notes		
1	AR051901	05/26/99	7	110820	28.27	3920	U			
•	AR051902	06/16/99	28	125940	28.27	4450	Ū			
	, , ,		28	120040	28.27	4640	υ			
	AR051903	06/16/99	20	131170	20.27	4040				
	AR051904	Discard								

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Kessy L For TERRA-MAR, Inc.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Col Arapaho R 06/17/99 DC98-050-	oad Improvements		Huitt-Zollars, Inc Kenneth F	d Bell Construction - Doug Teter uitt-Zollars, Inc Kenneth Roberts, P.E. own of Addison - James Pierce, P.E.		
SPECIF	ICATIONS			PROJ	ECT DATA		
Strength (psi):	650			Placement Date:	05/19/99		
Slump (in.):	2			Sampled By:	Moe II		
Air Content (%):	na			Weather:	Sunny		
Concrete Temp (°F)	80			Supplier/Mix:	Lattimore/42		
		FIEL	D DATA S	ET #1			
Ticket #:	6098045	Time Batched:	2:00	Time Sampled:	2:15		
Slump (in.):	2	Air Content:	na	Unit Weight (pcf):	na		
Conc. Temp. (°F):		Ambient Temp. (°F):	90	Yardage (c.y.):	30/30		
Placement Location	: Midway lot	70-6 and 60+00.6					
Sample Location:	****						
		FIEL	D DATA S	ET #2	******		
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):		Ambient Temp. (°F):					
Placement Location							
Sample Location:							

	CONCRETE COMPRESSION TEST RESULTS								
			BEAMS MC	LDED AND CUR	ED PER ASTM (31, TESTED PE	R ASTM C78		
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Moduius of Rupture (psi)	Notes	
1	AR051901 AR051902	05/26/99 06/16/99	7 28	7500 7800	6.00 6.00	6.25 6.25	625 650		
2									

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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		TERRA-MAR	R, INC.			
	GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080					
	CONCRETE INS	PECTION AND	COMPRES	SION TEST REPORT		
CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Impro 06/28/99 DC98-050-128	vements	Huitt-Zollars, Town of Add	TRIBUTION: struction - Doug Teter , Inc. Kenneth Roberts, F lison - James Pierce, P.E lison - Dave Wilde		
SPECIFICATIONS PROJECT DATA						
Strength (psi):	3500			Placement Date:	06/18/99	
Slump (in.):	4			Sampled By:	J. Tipton	
Air Content (%):	4 to 6			Weather:	Partly Cloudy	
Concrete Temp (°F)	95	_	٦	Supplier/Mix:		
		FIELD DA	TA SET #1			
Ticket #:	1342402	Time Batched:	11:38	Time Sampled:	12:25	
Slump (in.):	3 3/4	Air Content:		Unit Weight (pcf):		
Conc. Temp. (°F):	85 Am	bient Temp. (°F):	81	Yardage (c.y.):	10 yds	
Placement Location	NW corner of intersec	ction of Arapaho	& Tollway, sa	ampl,ed at 5' N. of Arapa	ho north curb	
	and 200' W. of Dallas	Parkway				
			TA SET #2			

	FIELD DATA SET #	2	
Ticket #:	Time Batched:	Time Sampled:	
Slump (in.):	Air Content:	Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):	
Placement Location:			
Remarks:			

			CONC		SSION TEST R	ESULTS			
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617								
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes	
1	AR061801	06/25/99	7	104350	28.27	3690	U		
	AR061802	06/25/99	7	90360	28.27	3200	U		
	AR061803	07/16/99	28						
	AR061804	07/16/99	28						
								MERGERMERT	
								JEROBORELL	

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERRA-MAR, INC. GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:06/28/99TMI REPORT #:DC98-050-134

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method: Tex 101-E Part II	1	Technician:	Mike Young	
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	06/16/99	
Minimum % Passing No. 4 Sieve:	60	Stabilizing Agent	Lime	

TEST NUMBER	LOCATION	PERCENT PASSING 1 3/4" SIEVE	PERCENT PASSING #4 SIEVE
SEGN REPORT	u v v v v v v v v v v v v v v v v v v v	C OTT DIE FR	
1	Arapaho Road, Station 66+50	100	62.0
2	Arapaho Road, Station 60+00	100	67.0
3	Arapaho Road, Station 17+26	100	63.0
		Instruct	PILIA
		I JUL	0 6 1999
	·	111	
		< You Bactorian sets in more free gets you soon and	· · · · · · · · · · · · · · · · · · ·

Remarks:

TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 06/10/99 DC98-050-125	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde
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SPECIFI	CATIONS			PROJ	ECT DATA
Strength (psi):	650			Placement Date:	05/12/99
Slump (in.):	4			Sampled By:	J. Tipton
Air Content (%):	na			Weather:	Partly Cloudy
Concrete Temp (°F)	na			Supplier/Mix:	Lattimore
		FIEL	D DATA SET	#1	
Ticket #:	7070645	Time Batched:	10:47	Time Sampled:	12:15
Slump (in.):	3 1/2	Air Content:	4.3	Unit Weight (pcf):	na
Conc. Temp. (°F):	86	Ambient Temp. (°F):	82	Yardage (c.y.):	150 yds
Placement Location:	South bour	nd Iane @ Spectrum S	<u>st.</u>	·····	
Sample Location:	200 S of A	rapaho Rd on Spectru	m St.		
		FIEL	D DATA SET	#2	
Ticket #:	7070657	Time Batched:	12:03	Time Sampled:	1:20
Slump (in.):	3 3/4	Air Content:	4.7	Unit Weight (pcf):	Na
Conc. Temp. (°F):	88	Ambient Temp. (°F):	86	Yardage (c.y.):	296 yds
Placement Location:	10'x10' lea	ve out and radius E. o	f Addison Rd	. on Arapaho Rd.	
Sample Location:	at 10'x10' i	eave out and radius of	n E. bound la	ne on Arapaho Rd.	

	CONCRETE COMPRESSION TEST RESULTS											
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #												
]	(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
1	AR051201	05/19/99	7	7260	6.05	6.15	605					
	AR051202	06/09/99	28	8220	6.00	6.10	685					
2	AR051203	05/19/99	7	7380	6.05	6.20	615					
~			-									
	AR051204	06/09/99	28	8700	5.80	6.10	725					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERRA-MAR, INC.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080 CONCRETE INSPECTION AND COMPRESSION TEST REPORT									
11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080 CONCRETE INSPECTION AND COMPRESSION TEST REPORT									
	CONCRETE INSPECTION AND COMPRESSION TEST REPORT								
CLIENT: Ed Bell Construction REPORT DISTRIBUTION:									
PROJECT: Arapaho Road Improvements Ed Bell Construction - Doug Teter									
REPORT DATE: 06/07/99 Huitt-Zollars, Inc. Kenneth Roberts, P.E.									
TMI REPORT #: DC98-050-123 Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde									
SPECIFICATIONS PROJECT DATA									
Strength (psi): 3000 Placement Date: 05/03/99	}								
Slump (in.): 5" Sampled By: JS									
Air Content (%): Veather: Clear/Wa	m								
Concrete Temp (°F): Supplier/Mix:TXI									
FIELD DATA SET #1									
Ticket #: 1304293 Time Batched: 11:24 Time Sampled: 12:45									
Slump (in.): 5 ⁿ Air Content: na Unit Weight (pcf): na									
Conc. Temp. (°F): Ambient Temp. (°F): 75 Yardage (c.y.): na									
Placement Location: Sidewalk on Arapaho & Quorum									
Sample Location:									
FIELD DATA SET #2									
Ticket #: Time Batched: Time Sampled:									
Slump (in.): Air Content: Unit Weight (pcf):									
Conc. Temp. (°F): Ambient Temp. (°F): Yardage (c.y.):									
Placement Location:									

	CONCRETE COMPRESSION TEST RESULTS										
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
1	AR050301	05/10/99	7	86110	28.27	3050	U				
	AR050302	05/31/99	28	121560	28.27	4300	U				
	AR050303	05/31/99	28	120220	28.27	4250	U				
	AR050304	Discard									

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Juny Fre. 13 TERRA-MAR, Inc.

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TERRA-MAR, INC.									
GEOTECH	INICAL ENVIRC	ONMENTAL	AND MATER	RIALS ENG	SINEERS				
DALLAS	FORT WORTH	HOUSTON	LONGVIEW	LUBBOCK	AUSTIN				
11050 Ables	Lane, Dallas, Texa	as 75229 Pl	ho ne:972-488-8 8	800 Fax: 972	-488-8080				

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction		REPORT DISTRIBUTION:					
PROJECT:	Arapaho Road Improve	ements	Ed Bell Cons	struction - Doug Teter				
REPORT DATE:	05/27/99			Inc. Kenneth Roberts,	P.E.			
TMI REPORT #:	DC98-050-124		Town of Addison - James Pierce, P.E.					
initial official			Town of Addison - Dave Wilde					
SPECI	FICATIONS		PROJECT DATA					
Strength (psi):	300 <u>0</u>			Placement Date:	04/28/99			
Slump (in.):				Sampled By:	Contractor			
Air Content (%):				Weather:	Clear/Warm			
Concrete Temp (°F):				Supplier/Mix:	TXI			
		FIELD DA	TA SET #1					
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		Unit Weight (pcf):				
Conc. Temp. (°F):	Amb	ient Temp. (°F):		Yardage (c.y.):				
Placement Location:	Light poles							
Remarks:	Cylinders made by con	tractor no othe	r information	given				
			TA SET #2					
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		Unit Weight (pcf):				
Conc. Temp. (°F):	Ambi	ent Temp. (°F):		Yardage (c.y.):				
Placement Location:								
Remarks:			_					

	CONCRETE COMPRESSION TEST RESULTS										
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
1	AR042801	05/05/99	7	87270	28.27	3090	U				
	AR042802	05/26/99	28	117220	28.27	4150	U				
	AR042803	05/26/99	28	116480	28.27	4120	U				
	AR042804	discard									

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

TERRA-MAR, Inc. re

TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS	FORT WORTH	HOUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Col Arapaho R 05/28/99 DC98-050-	oad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde				
SPECIFI	CATIONS			PRO	IECT DATA			
Strength (psi):	650			Placement Date:	05/19/99			
Slump (in.):	2	~~~~~ <i>₽₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩</i>		 Sampled By:	Moe II			
Air Content (%):	na			Weather:	Sunny			
Concrete Temp (°F)	80			Supplier/Mix:	Lattimore/42			
		FIELI	D DATA S	ET #1				
Ticket #:	6098045	Time Batched:	2:00	Time Sampled:	2:15			
Slump (in.):	2	Air Content:	na	Unit Weight (pcf):	na			
Conc. Temp. (°F):		Ambient Temp. (°F):	90	Yardage (c.y.):	30/30			
Placement Location:	Midway lot	70-6 and 60+00.6		-				
Sample Location:								
		FIEL	D DATA S	ET #2				
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:						
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):				
Placement Location:		••••••						
Sample Location:								

		BEAMS MC	LDED AND CUR	ED PER ASTM (31, TESTED PE	R ASTM C78	
Beam #	Test Date	Age (Days)	Max. Load (Ibs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
AR051901 AR051902	05/26/99 06/16/99	7 28	7500	6.00	6.25	625	
	AR051901	Beam # Test Date AR051901 05/26/99	Beam # Test Date Age (Days) AR051901 05/26/99 7	Beam #Test DateAge (Days)Max. Load (Ibs)AR05190105/26/9977500	Beam #Test DateAge (Days)Max. Load (Ibs)Average Depth, DAR05190105/26/99775006.00	Beam #Test DateAge (Days)Max. Load (Ibs)Average Depth, DAverage Width, BAR05190105/26/99775006.006.25	(Days) (Ibs) Depth, D Width, B Rupture (psi) AR051901 05/26/99 7 7500 6.00 6.25 625

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jerry Joo. 85 JERRA-MAR, INC.

		-			
GEOTECH	INICAL ENVIR	ONMENTAL	AND MATE	RIALS EN	GINEERS
DALLAS		HOUSTON	LONGVIEW	HIBBOOK	ALICTIAL

TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

PRO. REPC	CLIENT: Ed Bell Construction REPORT DISTRIBUTION: PROJECT: Arapaho Road Improvements Ed Bell Construction - Doug Teter REPORT DATE: 05/28/99 Huitt-Zollars, Inc. Kenneth Roberts, P.E. YMI REPORT #: DC98-050-126 Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde Town of Addison - Dave Wilde								
	SPECI	FICATIONS					PRO	JECT DAT	ĨA
Stren	Strength (psi): 3000		3000 psi			Placement Date:			05/19/99
Slump (in.):		2		_		Sampled By:			Moe II
Air Co	ontent (%):	na		-		Weather:		W	indy/ Sunny
Conci	rete Temp (°F)	75	-	-		Supplier/Mix:		Li	attimore/42
				FIELD DA	TA SET #1				
Ticke	t #:	6098024	_	Time Batched:	11:40	Time Sampled: 11:50			11:50
Slump (in.): 2		-	Air Content:	na	Unit Wei	ght (pa	of):	na	
Conc, Temp. (°F): 75			Amt	pient Temp. (°F):	85	Yardage (c.y.): 10 70			10 70
Place	ment Location	Driveway I	eft 60+32.18	3					
Rema	irks:								
					TA SET #2				
Ticket			_	Time Batched:		Time	Sample	ed:	
•	o (in.):		Air Content:			_ Unit Wei	ght (po	ະຖິ:	
	Temp. (°F):			pient Temp. (°F):		Yardage (c.y.):			
Rema	ment Location:								
Renia	нкз.								******
			CONC	RETE COMPRE	SSION TEST R	ESULTS			
				RED PER ASTM C31					
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes	
1	AR051901	05/26/99	7	110820	28.27	3920	U		
	AR051902	06/16/99	28						
	AR051903	06/16/99	28						
	AR051904		Hold						
					~~~~~~				

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jury I For TERRA-MAR, Inc.

DALLAS	FORT WORTH	HOUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Cor Arapaho Ro 05/20/99 DC98-050-	oad Improvements		<b>REPORT DISTRIBUTION:</b> Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde				
SPECIF	ICATIONS				PRO	JECT DATA		
Strength (psi):	650			Plac	ement Date:	04/21/99		
Slump (in.):	na			Sam	pled By:	EE		
Air Content (%):	3-5			Wea	ther:	Partly Cloudy/Windy		
Concrete Temp (°F)	na			Supp	blier/Mix:	Ed Bell		
·····		FIELI	DATA SI	ET #1				
Ticket #:	25982	Time Batched;	7;45	Tim	e Sampled:	8:33		
Slump (in.):	3 1/2	Air Content:	4.0	Unit V	Veight (pcf):	na		
Conc. Temp. (°F):	82	Ambient Temp. (°F):	71	Yai	rdage (c.y.):	30/18		
Placement Location:	Paving-Ara	paho Road Station 58	3+50 (?)	_				

FIELD DATA SET #2								
Ticket #:	Time Batched:	Time Sampled:						
Slump (in.):	Air Content:	Unit Weight (pcf):						
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):						
Placement Location:								
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS										
BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #	Set # Beam # Test Date Age Max. Load Average Average Modulus of Notes										
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
1	EBC042101	04/28/99	7	7800	6.05	6.30	650				
	EBC042102	05/19/99	28	8760	5.95	6.10	730				
		00/10/00	x	0,00	0.00	0.10	700				
							-				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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the written consent of TML. Results apply only to above tests.

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#### TERRA-MAR, INC.

**GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS** 

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	<b>REPORT DISTRIBUTION:</b>
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	05/25/99	Huitt-Zollars, Inc Kenneth Roberts, P.E.
TMI REPORT #'	DC98-050-125	Town of Addison - James Pierce, P.E.
TMI REPORT #:	DC98-050-125	Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

SPECIFI	CATIONS			PROJE	ECT DATA
Strength (psi):	650			Placement Date:	05/12/99
Slump (in.):	4			Sampled By:	J. Tipton
Air Content (%):	na			Weather:	Partly Cloudy
Concrete Temp (°F)	na			Supplier/Mix:	Lattimore
		FIEL	D DATA SET #	1	
Ticket #:	7070645	Time Batched:	10:47	Time Sampled:	12:15
Slump (in.):	3 1/2	Air Content:	4.3	Unit Weight (pcf):	na
Conc. Temp. (°F):	86	Ambient Temp. (°F);	82	Yardage (c.y.):	150 yds
Placement Location:	South bour	nd lane @ Spectrum S	St.		
Sample Location:	200 S of A	rapaho Rd on Spectru	im St.		
······································		FIEL	D DATA SET #	2	*************
Ticket #:	7070657	Time Batched:	12:03	Time Sampled:	1:20
Slump (in.):	3 3/4	Air Content:	4.7	Unit Weight (pcf):	Na
Conc. Temp. (°F):	88	Ambient Temp. (°F):	86	Yardage (c.y.):	296 yds
Placement Location:	10'×10' lea	ve out and radius E. o	f Addison Rd.	on Arapaho Rd.	
Sample Location:	at 10'x10' I	eave out and radius of	n E. bound lan	e on Arapaho Rd.	

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #											
1	AR051201 AR051202	05/19/99 06/09/99	7 28	7260	6.05	6.15	605				
2	AR051203 AR051204	05/19/99 06/09/99	7 28	7380	6.05	6.20	615				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JUNY T TUL JERRA-MAR, INC

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS								
	11	1050 Ables Lane, Dallas,	Texas 752	29 Phone:	972-488-8800			
С	ONCRETE	INSPECTION AND			NGTH TEST RE	PORT		
		(THIRD	POINT LO	)ADING)				
CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	PROJECT:         Arapaho Road Improvements         Ed Bell Construction - Doug Teter           REPORT DATE:         05/25/99         Huitt-Zollars, Inc Kenneth Roberts, P.E.							
SPECIF	ICATIONS					JECT DATA		
Strength (psi):	650				Placement Date:_	04/22/99		
Slump (in.):	4				Sampled By:	Moe II		
Air Content (%):					Weather:	Cloudy/Windy		
Concrete Temp (°F)	80				Supplier/Mix:	Ed Bell		
		FIEL	D DATA SE	ET #1				
Ticket #:	26011	Time Batched:	9:10	_	Time Sampled:	9:30		
Slump (in.);	4	Air Content:	5.0	-	Unit Weight (pcf):	na		
Conc. Temp. (°F):	80	Ambient Temp. (°F):	80	-	Yardage (c.y.):	30/18		
Placement Location:	L.8 Edwin	Lewis St. before stop	sign					
		FIEL	D DATA SE	T #2				
Ticket #:	169750	Time Batched:	11:50	_	Time Sampled:	12:10		
Slump (in.):	2	Air Content:	5.0	_	Unit Weight (pcf):			
Conc. Temp. (°F):	80	Ambient Temp. (°F):	85	_	Yardage (c.y.):	32/8		
Placement Location:	Exit to Spe	ctrum and Edwin Lew	is	_				
Remarks:								

TERRA-MAR, INC.

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
	AR042201	04/29/99	7	7500	5.95	6.15	625				
1	AR042202	04/29/99	7	6960	6.05	6.30	580				
	AR042203	05/20/99	28	9120	6.05	6.35	760				
	AR042204	05/20/99	28	8880	5.95	6.35	740				
	AR042205	04/23/99	1	7320	6.00	6,30	610				
	AR042206	04/29/99	7	11220	5.95	6.25	935				
2	AR042207	05/20/99	28	11760	6.00	6.10	980				
	AR042208	05/20/99	28	11520	6.00	6.00	960				
	AR042209	04/22/99	2 hrs	1200	6.00	6.10	100				
	AR042210	04/22/99	4 hrs	2760	6.00	6.20	230	······································			

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Constructio			EPORT DISTRIBUTION:				
PROJECT:	Arapaho Road Imp	rovements	Ed Bell Construction - Doug Teter					
REPORT DATE:	05/12/99			, Inc. Kenneth Roberts, F				
TMI REPORT #:	DC98-050-123			lison - James Pierce, P.I lison - Dave Wilde	<b>**</b> ****			
SPECI	FICATIONS			PROJECT	Г DATA			
Strength (psi):	3000			Placement Date:	05/03/99			
Slump (in.):	5"			Sampled By:	JS			
Air Content (%):				Weather:	Clear/Warm			
Concrete Temp (°F):	te Temp (°F): Supplier/Mix:				TXI			
***************************************		FIELD DA	TA SET #1					
Ticket #:	1304293	Time Batched:	11:24	Time Sampled:	12:45			
Slump (in.):	5"	Air Content:	na	Unit Weight (pcf):	na			
Conc. Temp. (°F):	<i>A</i>	mbient Temp. (°F):	75	Yardage (c.y.):	na			
Placement Location:	Sidewalk on Arapal	no & Quorum						
Sample Location:	Sidewalk Arapaho							
		FIELD DA	TA SET #2					
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		_ Unit Weight (pcf): _				
Conc. Temp. (°F):		mbient Temp. (°F):		Yardage (c.y.):				
Placement Location:								
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS									
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617									
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
1	AR050301	05/10/99	7	86110	28.27	3050	U			
	AR050302	05/31/99	28							
	AR050303	05/31/99	28							
	AR050304		Hold							

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jerry L. Fos po TERRA-MAR, Inc.

	TERRA-MAR, IN	IC.		
GEOTECHNICAL	ENVIRONMENTAL	AND	MATERIALS	ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

#### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

REPO	NT: JECT: DRT DATE: REPORT #:	Ed Bell Co Arapaho R 05/10/99 DC98-050	ements	Huitt-Zollars, Town of Addi	<b>STRIBUTION:</b> hstruction - Doug Teter s, Inc. Kenneth Roberts, P.E. idison - James Pierce, P.E. idison - Dave Wilde			
	SPECI	FICATIONS					PR	OJECT DATA
Stren	gth (psi):					Placement Da	ite:	04/28/99
Slum	p (in.):		*			Sampled By:		Contractor
Air Co	ontent (%):					Weather:		<u>Clear/Warm</u>
Conci	rete Temp (°F)	x *				Supplier/Mix:		TXI
				FIELD DA	TA SET #1			
Ticket #: Time Bat				Time Batched:	*****	Time	Sam	oied:
Slump (in.):			Air Content:	Unit Weight (pcf):				
Conc. Temp. (°F): Ambier			ient Temp. (°F):	ent Temp. (°F): Ya			p.y.):	
Place	ment Location:	Light pole	s					
Rema	irks:	Cylinders r	made by cor	ntractor no othe	r information	given		
					TA SET #2			
Ticke				Time Batched:		Time \$	pled:	
	o (in.):			Air Content: ient Temp. (°F):		Unit Wei	hei):	
	Temp. (°F):		. Amb	vient Temp. (°F):		Yardage (c.y.);		
Rema	ment Location:							
Reine	II NO.	******						
			CONC	RETE COMPRE	SSION TEST R	ESULTS		
				ED PER ASTM C31				
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	AR042801	05/05/99	7	87270	28.27	3090	υ	
	AR042802	05/05/99	7					

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

28

Hold

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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AR042803 05/26/99

AR042804

TERRA-MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Cor Arapaho Re 04/20/99 DC98-050-	pad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS			PROJ	ECT DATA		
Strength (psi):	650			Placement Date;	03/17/99		
Slump (in.):	4-6			Sampled By:	J. Perez		
Air Content (%):	4.5			Weather:	Cloudy/Warm		
Concrete Temp (°F):				Supplier/Mix:	Lattimore		
		FIELD	DATA SE	T #1			
Ticket #:	7067464	Time Batched:	na	Time Sampled:	9:30		
Slump (in.):	6 1/2	Air Content:	4.0	Unit Weight (pcf):	па		
Conc. Temp. (°F):	68	Ambient Temp. (°F):	70	Yardage (c.y.):			
Placement Location: Remarks:	Intersection	Addison & Arapho, rig	ht lane				
			DATA SE				
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F): Placement Location:		Ambient Temp. (°F):		Yardage (c.y.):			
Remarks:				······			

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age (Days)	Max. Load (ibs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes			
1	AR031701 AR031702	03/24/99 04/14/99	7 28	8580	5.90	6.05	715 **	*Damaged in field			

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Terry ØG. **TERRA-MAR** 

			TEF	RRA-MAR,	, INC.					
						ERIALS ENGINEEI				
	DALLAS	FORT WORT				/ LUBBOCK AUSTIN	V			
	17	1050 Ables Land	e, Dallas	s, Texas 752	229 Phone	e:972-488-8800				
c	ONCRETE			D FLEXUF POINT LO		ENGTH TEST REP	ORT			
CLIENT:Ed Bell ConstructionREPORT DISTRIBUTION:PROJECT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterREPORT DATE:05/03/99Huitt-Zollars, Inc Kenneth Roberts, P.E.TMI REPORT #:DC98-050-122Town of Addison - James Pierce, P.E.Town of Addison - Dave WildeTown of Addison - Dave Wilde										
Specifications650 flaxC/assPROJECT DATAStrength (psi):4000 psi650 flaxC/assPlacement Date:04/22/99Slump (in.):4ConcreteSampled By:Moe II										
Strength (psi):	4000 psi	650 +14	- C1	455 K		Placement Date:	04/22/99			
Slump (in.):	4			Concre	te-	Sampled By:	Moe II			
Air Content (%):						Weather:	Cloudy/Windy			
Concrete Temp (°F)	) 80					Supplier/Mix:	Ed Bell			
			FIE	LD DATA SE	ET #1					
Ticket #:	26011	Time B	atched:	9:10		Time Sampled:	9:30			
Slump (in.):	4	Air C	content:	5.0		Unit Weight (pcf):	na			
Conc, Temp. (°F):	80	Ambient Tem	ip. (°F):	80		Yardage (c.y.):	30/18			
Placement Location	i: L.8 Edwin	Lewis St. befc	ore stop	sign	-					
	B									
			FIE	LD DATA SE	ET #2					
Ticket #:	169750	Time B	atched:	11:50		Time Sampled:	12:10			
Slump (in.):	2	Air C	content:			Unit Weight (pcf):				
Conc. Temp. (°F):	80	Ambient Tem				Yardage (c.y.):	32/8			
Placement Location Remarks:	: Exit to Spe	ctrum and Edv	win Lev	vis						
				<u> </u>		·······				
		CONCRE	TE CO	MPRESSION	I TEST RE	SULTS				
4	1	BEAMS MOLDED	AND CUR	ED PER ASTM	C31. TESTED	PER ASTM C78				

i								
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)	
	AR042201	04/29/99	7	7500	5.95	6.15	625	
1	AR042202	04/29/99	7	6960	6.05	6.30	580	
	AR042203	05/20/99	28					
	AR042204	05/20/99	28					
	AR042205	04/23/99	1	7320	6.00	6.30	610	
	AR042206	04/29/99	7	11220	5,95	6.25	935	
2	AR042207	05/20/99	28					
	AR042208	05/20/99	28					
	AR042209	04/22/99	2 hrs	1200	6.00	6.10	100	
	AR042210	04/22/99	4 hrs	2760	6.00	6.20	230	

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
 (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Jung T. - tore TERRA-MAR, INC. ton, 10

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### TERRA-MAR, INC. GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

LLAS FORTWORTH HOUSTON LONGVIEW LUBBOOK AUSTI

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 04/26/99 DC98-050-115	<b>REPORT DISTRIBUTION:</b> Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P. Town of Addison - James Pierce, P.E.
		Town of Addison - Dave Wilde

SPECIFI	CATIONS			PROJEC	CT DATA
Strength (psi):	650			Placement Date:	03/26/99
Slump (in.):	3-5	·····		Sampled By:	B. Jones
Air Content (%):	5-7			Weather:	Sunny
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore
		FIEL	D DATA SET #	1	
Ticket #:	068268	Time Batched:	9:13	Time Sampled:	9:56
Slump (in.):	4 1/2	Air Content;	5.19	Unit Weight (pcf):	na
Conc. Temp. (°F):	64	Ambient Temp. (°F):	55	Yardage (c.y.):	90/306
	330 ft from	intersection Arapaho Rd	@ Tollway station	on 63 + 00	
	·····	FIEL	D DATA SET #	2	
Ticket #:	068285	Time Batched:	11:15	- Time Sampled:	12:00

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	ED PER ASTM C Average Depth, D	Average Width, B	R ASTM C78 Modulus of Rupture (psi)	Notes			
1	AR032601 AR032602	04/02/99 04/23/99	7 28	7680 8820	5.90 5.95	6.35 6.30	640 735				
2	AR032603 AR033004	04/02/99 04/23/99	7 28	7620 9780	5.80 6.05	6.15 6.10	635 815	· · · · · · · · · · · · · · · · · · ·			

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Juny T. T. TERRA-MAR,

P.E.

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11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 04/28/99 DC98-050-121	<b>REPORT DISTRIBUTION:</b> Ed Bell Construction - Doug Huitt-Zollars, Inc Kenneth F Town of Addison - James Pie Town of Addison - Dave Wild	Roberts, P.E. erce, P.E.
SPECI	FICATIONS	PROJ	ECT DATA
Strength (psi):	650 Flex	Placement Date:	04/21/99
Slump (in.):		Sampled By:	EE
Air Content (%):	3-5	Weather:	P. Cloudy/Windy

·····		FIELI	D DATA SET	#1		
Ticket #:	25982	Time Batched:	7:45	Time Sampled:	8:33	
Slump (in.):	3 1/2	Air Content:	4.0	Unit Weight (pcf):	na	
Conc. Temp. (°F):	82	Ambient Temp. (°F):	71	Yardage (c.y.):	9	
Placement Location	Paving - A	rapaho Road Sta 58+5	0			

Supplier/Mix:

Ed Bell

FIELD DATA SET #2									
Ticket #:	Time Batched:	Time Sampled:							
Slump (in.):	Air Content:	Unit Weight (pcf):							
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):							
Placement Location:									
Remarks:									

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes			
1	AR042101 AR042102	04/28/99 05/19/99	7 28	7800	6.05	6.30	650				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

Concrete Temp (°F)

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Co Arapaho R 04/28/99 DC98-050-	oad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde		
SPECIF	ICATIONS			PROJ	ECT DATA	
Strength (psi):	650			Placement Date:	04/21/99	
Slump (in.):				Sampled By:	EE	
Air Content (%):	3-5			Weather:	P. Cloudy/Windy	
Concrete Temp (°F)				Supplier/Mix:	Ed Bell	
		FIEL	D DATA SE	ET #1		
Ticket #:	7068521	Time Batched:	7:45	Time Sampled:	8:33	
Slump (in.):	2	Air Content:	4.0	Unit Weight (pcf):	na	
Conc. Temp. (°F):	78	Ambient Temp. (°F):	71	Yardage (c.y.):	9	
Placement Location	: Median of A	Arapaho Road				
		FIEL	D DATA SE	T #2		
Ticket #:	6094472	Time Batched:	12:51	Time Sampled:	2:00	
Slump (in.):	1 1/2	Air Content:	4.0	Unit Weight (pcf):		
Conc. Temp. (°F):	76	Ambient Temp. (°F):	88	Yardage (c.y.):	100-200	
Placement Location:	Median of	Arapaho Road				

Remarks:

CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age (Days)	Max. Load (Ibs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes	
1	AR040501 AR040502	04/28/99 05/19/99	7 28	7260 7740	6.05 5.95	6.20 6.05	605 645 •	<ul> <li>Does not meet specification</li> </ul>	
2	AR040503 AR040504	04/28/99 05/19/99	7 28	7200 8640	5.95 6.00	6.30 6.35	600 720		

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERRA-MAR, INC.								
GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS								
DALLAS	EODTMODTH	HOUSTON	LONGVIEN	LUBBOCK AUSTI	A./			

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	ATE: 04/28/99			<b>REPORT DISTRIBUTION:</b> Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde		
SPECIF	ICATIONS			PROJ	ECT DATA	
Strength (psi):	650			Placement Date:	03/30/99	
Slump (in.):				Sampled By:	John Sullivan	
Air Content (%):				Weather:	Cloudy	
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell	
		FIELI	DATA SE	ET #1		
Ticket #:	25656	Time Batched:	na	Time Sampled:	11:30	
Slump (in.):	2	Air Content:	3.5	Unit Weight (pcf):	na	
Conc. Temp. (°F):	65	Ambient Temp. (°F):		Yardage (c.y.):		
Placement Location:	East side	of Arapaho Road, static	n 59+00			
Remarks:					Pulles and a state of the state	
		FIELD	) DATA SE	ET #2		
Ticket #:		Time Batched:		Time Sampled:		
Slump (in.):		Air Content:		Unit Weight (pcf):		
Conc, Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):		
Placement Location:		····				
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78								
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes	
1	AR033001 AR033002 AR033003	04/06/99 04/06/99 04/27/99	7 7 28	7680 7980 8400	6.00 6.05 6.05	6.00 6.05 6.20	640 665 700		
	AR033004	04/27/99	28	8760	6.05	6.25	730		

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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# CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:				REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde						
SPECIF	SPECIFICATIONS PROJECT DATA									
Strength (psi):	650			Placement Date:	03/25/99					
Slump (in.):	3-5			Sampled By:	B. Jones					
Air Content (%):	5-7			Weather	Sunny					
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore					
		FIELI	D DATA S	ET #1						
Ticket #:	068166	Time Batched:	8:40	Time Sampled:	9:17					
Slump (in.):	4 1/2	Air Content:	3.0	Unit Weight (pcf):	na					
Conc. Temp. (°F):	65	Ambient Temp. (°F):	91	Yardage (c.y.):	63/300					
Placement Location	: 100 ft from i	intersection Tollway & Ara	apaho Rd							
	Second air t	est @ 99 yards was 5.1%	2							
FIELD DATA SET #2										
Ticket #:	068230	Time Batched:	2:31	Time Sampled:	3:00					
Slump (in.):	5.00	Air Content:	4.1	Unit Weight (pcf):	na					
Conc. Temp. (°F):	67	Ambient Temp. (°F):	90	Yardage (c.y.):	na					
Placement Location: 225 feet from intersection of Tollway and Arapaho Rd.										

Placement I Remarks:

[	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age (Days)	Max. Load (Ibs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes			
1	AR032501 AR032502	04/01/99 04/22/99	7 28	8280 8220	6.00 6.05	6.20 6.00	690 685				
2	AR032503 AR032504	04/01/99 04/22/99	7 28	8760 9480	6.10 5.95	6.00 6.15	730 790				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

# STABILIZED SOIL GRADATION REPORT

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:04/21/99TMI REPORT #:DC98-050-118

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method:		Technician:	M. Kashem	
Minimum % Passing 1 3/4" Sieve: _	100	Date Tested:	04/19/99	
Minimum % Passing No. 4 Sieve: _	60	_Stabilizing Agent _	Lime	

		PERCENT PASSING	PERCENT PASSING
TEST NUMBER	LOCATION	1 3/4" SIEVE	#4 SIEVE
		,	×
1	East Bound, Arapaho Rd station 159 + 00	100	69.5
2	South Bound, Spectrum @ 18 + 00	100	60.3
3	South Bound, Spectrum @ 16 + 75	100	68.7
			?

**Remarks:** 

TERRA-MARTINC.

#### Fort Worth Houston Austin Longview Lubbock Dallas

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

#### LIME TREATED SOIL THICKNESS DETERMINATIONS

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Client: Ed Bell Construction **Distribution:** 

Ed Bell Construction - Doug Teter

- Project: Arapaho Road Improvements
- Report No.: DC98-050-120

Report Date: 02/26/99

# LIME TREATED SOIL DEPTH CHECKS TEST DEPTH NO. LOCATIONS (in) S. Bound Spectrum Rd @ 18 + 00 7.5" 1 2 S. Bound Spectrum Rd @ 16 + 50 7.0" 3 E. Bound Arapaho Rd @ 159 + 00 8.0" ţ

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## SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction

**PROJECT:** Arapaho Road Improvements REPORT DATE: 04/21/99 DC98-050-119 TMI REPORT NO .:

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

TEST DATA

04/20/99

SPECIFICATIONS

95+ Percent Compaction: Opt. + Moisture Content (%):

M. Kashem Technician: MATERIAL REFERENCE CURVE DATA CURVE TEST OPTIMUM MAX, DRY NO. METHOD MATERIAL DESCRIPTION MOISTURE (%) DENSITY (pcf) Lime Treated Brown Clay w/Gravel 5 25.7 93.6 ASTM D698 Lime Treated Brown Clay 7 36.6 80.6 ASTM D699

#### **IN-PLACE TEST RESULTS**

	DENSITY AND MOISTURE TESTS ARE PER ASTM D2922, D3017, RESPECTIVELY										
TEST	ELEVATION		REF.	%	DRY	%					
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY					
1	Grade	S. Bound Spectrum Rd @ 18 + 00	5	26.0	90.8	97.0					
2	Grade	S. Bound Spectrum Rd @ 17 + 00	5	26.6	89.9	96.0					
3	Grade	E. Bound Arapaho Rd @ 159 + 00	7	35.8	79.1	98.1					
					j.						
					i						
GAUGE I.D.:	10746	STD. DENSITY COUNT:	2537	STD. N	MOISTURE COUNT:	509					

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

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**DISTRIBUTION:** 

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### CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	PROJECT:       Arapaho Road Improvements         REPORT DATE:       04/14/99         FMI REPORT #:       DC98-050-117			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIF	CATIONS				PROJ	ECT DATA	
Strength (psi):	650				Placement Date:	04/05/99	
Slump (in.):	2				Sampled By:	BR	
Air Content (%):	4-6				Weather:	Sunny/Cloudy	
Concrete Temp (°F)	55				Supplier/Mix:	Lattimore	
		FIEL	D DATA S	ET #1			
Ticket #:	7068521	Time Batched:	12:08		Time Sampled:	1:15	
Slump (in.):	2	Air Content:	4.0		Unit Weight (pcf):	na	
Conc. Temp. (°F):	78	Ambient Temp. (°F):	88		Yardage (c.y.):	0-100	
Placement Location:	Median of A	rapaho Road					
		E(E)	D DATA S	CT #7			
Ticket #	6094472	Time Batched:	12:51	EI #4	Time Sampled:	2:00	
Ticket #: Slump (in.):	1 1/2	Air Content:	4.0		Jnit Weight (pcf):	2.00	
Conc. Temp. (°F):	76	Ambient Temp. (°F):	88		Yardage (c.y.):	100-200	
Placement Location:			00	··		100-200	
Remarks:					••••••••••••••••••••••••••••••••••••••		

	CONCRETE COMPRESSION TEST RESULTS											
Set #	Beam #	Test Date	BEAMS MC Age (Days)	Max. Load (lbs)	ED PER ASTM C Average Depth, D	31, TESTED PE Average Width, B	R ASTM C78 Modulus of Rupture (psi)	Notes				
1	AR040501 AR040502	04/12/99 05/03/99	7 28	7260	6.05	6.20	605					
2	AR040503 AR040504	04/12/99 05/03/99	7 28	7200	5.95	6.30	600					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

#### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 04/13/99 DC98-050-105	STRIBUTION: truction - Doug Teter Inc. Kenneth Roberts, P.E. son - James Pierce, P.E. son - Dave Wilde			
SPEC	FICATIONS			PROJE	CT DATA
Strength (psi):	4000			Placement Date:	03/15/99
Slump (in.):	3-5			Sampled By:	B. Jones
Air Content (%):	4-6			Weather:	Sunny
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore
		FIELD DATA	SET #1		
Ticket #:	67572 <b>T</b> ir	ne Batched:	2:59	Time Sampled:	3:40
Slump (in.):	3	Air Content:	4.5	Unit Weight (pcf):	
Conc. Temp. (°F):	65 Ambient	Temp. (°F):	69	Yardage (c.y.):	8/8
<b>Placement Location</b>	Piers for traffic lights, NW &	SW corner of Ar	rapaho @ Ad	dison + 1 pier approx.	150 yds from intersection
Remarks:	Concrete was 1.5 hours late				
<b>()</b>		FIELD DATA	SET #		
Ticket #:	Tir	ne Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	Àmbient	Temp. (°F);		Yardage (c.y.):	

Placement Location: Remarks:

	CONCRETE COMPRESSION TEST RESULTS										
Set #	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617           Set #         Cylinder #         Test Date         Age (Days)         Max. Load (lbs)         Area (sq. in.)         Strength (psi)         FC         Notes										
	Oymidel #			100X. 2010 (100)	71100 (04: 11:)	ou engui (poi)	<u> </u>	110100			
1	AR031501	03/22/99	7	148320	28.27	5250	U				
	AR031502	04/12/99	28	155560	28.27	5500	U				
	AR031503	Discard									

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

TERRA

TEP	RRA	-MA	R.	INI	C.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

#### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construct				
PROJECT:	Arapaho Road Ir	•		uction - Doug Teter	
REPORT DATE:	04/19/99			nc. Kenneth Roberts, P.E.	
TMI REPORT #:	DC98-050-107			on - James Pierce, P.E.	
<b></b>			rown of Addis	on - Dave Wilde	
SPECI			PROJECT	DATA	
Strength (psi):	3000			Placement Date:	03/19/99
Slump (in.):	3-4			Sampled By:	B. Pink
Air Content (%):				Weather:	Overcast
Concrete Temp (°F)	95			Supplier/Mix:	TXI
		FIELD DAT	A SET #1		
Ticket #:	1265633	Time Batched:	8:20	Time Sampled:	10:30
Slump (in.):	3	Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	70	Ambient Temp. (°F):	56	Yardage (c.y.):	20@30
<b>Placement Location:</b>	1000 ft. E. of Ad	dison Rd. on Arapaho W.B	I. sidewalk in f	ront of Dart	
Remarks:	1800 ft. E. of Ad	dison Rd. on Arapaho W.B	. sidewalk in f	iront on Dart	
		FIELD DAT	TA SET #		
Ticket #:		Time Batched:		Time Sampled;	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):	
Placement Location:					
Remarks:					

			CONC	RETE COMPRE	SSION TEST R	ESULTS					
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
1	AR031901	03/26/99	7	93400	28.27	3300	U				
	AR031902	03/26/99	7	90240	28.27	3190	υ				
	AR031903	04/16/99	28	122820	28.27	4340	υ				
	AR031904	04/16/99	28	120540	28.27	4260	U				

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C13B, C143, C172, C231

Luny TERRA

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

#### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

REPO	NT: JECT: DRT DATE: REPORT #:	CT:       Arapaho Road Improvements       Ed Bell Construction - Doug Teter         IT DATE:       04/20/99       Huitt-Zollars, Inc. Kenneth Roberts, P.E.								
	SPECI	FICATIONS	,				PRC	<b>JECT DA</b>	TA	,
Streng	trength (psi): 3000			_		Placement Da	ite:		03/22/99	
Slump	p (in.):	3-5		-		Sampled By:			D. Bell	
Air Co	ontent (%):	4-6		-		Weather:			Sunny/82	
Concr	rete Temp (°F)	98		•		Supplier/Mix:			TXI	
				FIELD DA	TA SET #1					
Ticket	t #:	1267092		Time Batched:	1:10	Time	Samp	led:	1:30	
Slump	p (in.):	2 1/2	····	Air Content:	5.5	Unit Weight (pcf):			na	
Conc.	Temp. (°F):	76	Amb	pient Temp. (°F):	80	Yarda	ige (c	:.y.):	10	
Place Rema		Station 49	+ 90 Eastbo	ound Arapaho F	₹d. sidewalk					
			144444	FIELD DA	TA SET #			1		
Ticket	[#:		<b></b>	Time Batched:		Time	Samp	led:		
Slump	o (in.):		_	Air Content:		Unit Weight (pcf):				
	Temp. (°F):		Amb	pient Temp. (°F):		. Yarda	ige (c	:.y.):		
	ment Location:	* *	*****							
Rema	rks:									
Set #	Cylinder #			RED PER ASTM C31, Max. Load (lbs)				Notes	•	
Sel #		Test Date	Aye (Days)		Alea (sq. iii.)	Strength (psi)	FU	NULCO	<u>}</u>	
1	AR032201	03/29/99	7	103170	28.27	3650	U			

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

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(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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04/19/99

04/19/99

discard

AR032202

AR032203

AR032204

Lessy TERRA-MAR

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

#### CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
<b>REPORT DATE:</b>	04/01/99	Huitt-Zollars, Inc Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-114	Town of Addison - James Pierce, P.E.
		Town of Addison - Dave Wilde

SPECIFI	CATIONS			PROJEC	CT DATA	
Strength (psi):	650			Placement Date:	03/25/99	
Slump (in.):	3-5			Sampled By: B. J		
Air Content (%):	5-7			Weather:	Sunny	
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore	
		FIEL	D DATA SET #1			
Ticket #:	068166	Time Batched:	8:40	Time Sampled:	9:17	
Slump (in.):	4 1/2	Air Content:	3.0	Unit Weight (pcf):	na	
Conc. Temp. (°F):	65	Ambient Temp. (°F):	91	Yardage (c.y.):	63/300	
Placement Location:	100 ft from	intersection Tollway & Ar	apaho Rd			
	Second air	test @ 99 yards was 5.1%	6			
		FIEL	D DATA SET #2	2		
Ticket #:	068230	Time Batched:	2:31	Time Sampled:	3:00	
Slump (in.):	5.00	Air Content:	4.1	Unit Weight (pcf):	na	
Conc. Temp. (°F):	67	Ambient Temp. (°F):	90	Yardage (c.y.):	na	
Placement Location:	225 feet fro	m intersection of Tollway	and Arapaho R	d		
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes			
1	AR032501 AR032502	04/01/99 04/22/99	7 28	8280	6.00	6.20	690				
2	AR032503 AR032504	04/01/99 04/22/99	7 28	8760	6.10	6.00	730				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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USAN FIND. TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

### CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:				REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS			PRO.	JECT DATA		
Strength (psi):	650			Placement Date:	03/30/99		
Slump (in.):				Sampled By:	John Sullivan		
Air Content (%):				Weather:	Cloudy		
Concrete Temp (°F)	95	·······		Supplier/Mix:	Ed Bell		
		FIELD	DATA S	ET #1			
Ticket #:	25656	Time Batched;	na	Time Sampled:	11:30		
Slump (in.):	2	Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):	65	Ambient Temp. (°F):	***	Yardage (c.y.):			
Placement Location:	East side of	Arapaho Road, station 59	)+00				
		FIELD	DATA S	ET #2			
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:	••••••••••••••••••••••••••••••••••••••	Unit Weight (pcf):			
Conc. Temp. (°F):		Ambient Temp, (°F):		Yardage (c.v.):			
Placement Location:	*********						
Remarks:	****			······································			
				· · · · · · · · · · · · · · · · · · ·			
			RESSIO				

			Ļυ		INFREGGION	I I CO I KEOU	1-12	
			BEAMS MC	LDED AND CUR	ED PER ASTM	31, TESTED PE	R ASTM C78	
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)	
1	AR033001	04/06/99	7	7680	6.00	6.00	640	
	AR033002	04/06/99	7	7980	6,05	6.05	665	
	AR033003	04/27/99	28					
	AR033004	04/27/99	28					
		1				1	1	

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny TERF e d **TERRA-MAR** 

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

## CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Cor Arapaho Ro 04/07/99 DC98-050-1	ad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde		
SPECIF	ICATIONS			PROJE	CT DATA	
Strength (psi):	650			Placement Date:	03/26/99	
Slump (in.):	3-5			Sampled By:	B. Jones	
Air Content (%):	5-7			Weather:	Sunny	
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore	
		FIELI	D DATA S	ET #1		
Ticket #:	068268	Time Batched:	9:13	Time Sampled:	9:56	
Slump (in.):	4 1/2	Air Content:	5.19	Unit Weight (pcf):	na	
Conc. Temp. (°F):	64	Ambient Temp. (°F):	55	Yardage (c.y.):	90/306	
Placement Location	: 330 ft from	intersection Arapaho Rd	@ Tollway	station 63 + 00		
<b>2.</b> ,		FIEL	D DATA S	ET #2		
Ticket #:	068285	Time Batched:	11:15	Time Sampled:	12:00	
Slump (in.):	4	Air Content:	6.3	Unit Weight (pcf):		
Conc. Temp. (°F):	66	Ambient Temp. (°F):	70	Yardage (c.y.):	144	
	: Arapaho Ro	ad at station 62 + 00				
Remarks:						

					MPRESSION			
Set #	Beam #	Test Date	BEAMS MC Age (Days)	LDED AND CUR Max. Load (lbs)	ED PER ASTM C Average Depth, D	31, TESTED PE Average Width, B	R ASTM C78 Modulus of Rupture (psi)	Notes
1	AR032601 AR032602	04/02/99 04/23/99	7 28	7680	5.90	6.35	640	
2	AR032603 AR033004	04/02/99 04/23/99	7 28	7620	5.80	6.15	635	

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny J. Fun TERRA-MAR, INC.

**GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS** 

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

#### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:	
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter	
REPORT DATE:	04/08/99	Huitt-Zollars, Inc. Kenneth Roberts, P.	Ξ.
TMI REPORT #:	DC98-050-104	Town of Addison - James Pierce, P.E.	
		Town of Addison - Dave Wilde	
SPEC	IFICATIONS	PROJE	CT DATA
Strength (psi):	3000	Placement Date:	03/10/99
Slump (in.):	3-5	Sampled By:	Contractor
Air Content (%):	4-6	Weather:	Partly Sunny
Concrete Temp (°F)	95	Supplier/Mix:	TXI
	FIEL	D DATA SET #1	

Ticket #:		Time Batched:	12:00	Time Sampled:	12:32	
Slump (in.):	3	Air Content:	4.5	Unit Weight (pcf):		
Conc. Temp. (°F):	65	Ambient Temp. (°F):	73	Yardage (c.y.):	10/20	
<b>Placement Location</b>	Station 65 + 0	00, right 25				
Remarks:						
			SET #2			

	FILLD DATA SET #2		
Ticket #:	Time Batched:	Time Sampled:	
Slump (in.):	Air Content:	Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):	
<b>Placement Location:</b>			
Remarks:			

	CONCRETE COMPRESSION TEST RESULTS								
		and the second		RED PER ASTM C31					
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes	
1	AR031002	03/17/99	7	101930	28.27	3610	υ		
	AR031003	04/07/99	28	135010	28.27	4780	υ		
							>		
	·····							· · · · · · · · · · · · · · · · · · ·	

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28,27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Gerry **TERRA** AR, Inc.

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	TERRA-MAR, INC.
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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

#### CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction	on	REPORT D	ISTRIBUTION:	
PROJECT:	Arapaho Road Imp	rovements	Ed Bell Con	struction - Doug Teter	
REPORT DATE:	03/29/99		Huitt-Zollars	, Inc. Kenneth Roberts, P.E.	
TMI REPORT #:	DC98-050-107		Town of Add	ison - James Pierce, P.E.	
			Town of Add	lison - Dave Wilde	
SPECI	FICATIONS		,	PROJECT	DATA
Strength (psi):	3000			Placement Date:	03/19/99
Slump (in.):	3-4			Sampled By:	B. Pink
Air Content (%):				Weather:	Overcast
Concrete Temp (°F)	95			Supplier/Mix:	IXT
		FIELD DA	TA SET #1		
Ticket #:	1265633	Time Batched:	8:20	Time Sampled:	10:30
Slump (in.);	3	Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	70	Ambient Temp. (°F):	56	Yardage (c.y.):	20@30
Placement Location:	: 1000 ft. E. of Addis	son Rd. on Arabaho W	.B. sidewalk i	n front of Dart	

1800 ft. E. of Addison Rd. on Arapaho W.B. sidewalk in front on Dart

	FIELD DATA SET #		
Ticket #:	Time Batched:	Time Sampled:	
Slump (in.):	Air Content:	Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient Temp. (*F):	Yardage (c.y.):	
Placement Location:			
Remarks:			

	CONCRETE COMPRESSION TEST RESULTS							
	<u> </u>	YLINDERS MC	DLDED AND CUI	RED PER ASTM C31,	TESTED PER AS	TM C39, CAPPED	PER A	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	AR031901	03/26/99	7	93400	28.27	3300	υ	
	AR031902	03/26/99	7	90240	28.27	3190	U	
	AR031903	04/16/99	28					
	AR031904	04/16/99	28					

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Remarks:

Surry TERRA-MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

## CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

		Ed Bell Con Arapaho Ro 03/25/99 DC98-050-1	ad Improv	vements	ements Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts Town of Addison - James Pierce, P. Town of Addison - Dave Wilde				
	SPECIF	ICATIONS					PI	ROJECT DATA	
Streng	gth (psi):	650		-			Placement Dat		
Slump	o (in.):	4-6		_			Sampled By:	J. Perez	
Air Co	ontent (%):	4.5		-			Weather:	Cloudy/Warm	
Concr	ete Temp (°F)	·		•			Supplier/Mix:	Lattimore	
				FIE	LD DATA SE	T #1		•	
Ticket	#:	7067464	Ti	ime Batched:	na		Time Sample	d: 9:30	
	o (in.):	6 1/2		Air Content:	4.0	-	Jnit Weight (pc	f): na	
	Conc. Temp. (°F): 68 Ambient Temp. (°F): 70			-	Yardage (c.y.):				
	ment Location:	Intersection				<b></b>			
				FIE	LD DATA SE	T #2			
Ticket	#		Ti	ime Batched:			Time Sample	d:	
Slum	) (in.):			Air Content:		Unit Weight (pcf):			
	Temp. (°F):		Ambien	t Temp. (°F):		•	Yardage (c.y	.);	
	ment Location:					-			
Rema	rks:							···· <u>·</u>	
						TEST RESU			
						31, TESTED PE			
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes	
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)		
1	AR031701	03/24/99	7	8580	5.90	6.05	715		
				~~~~	9.00	₩, ₩₩	1 1 147		
	AR031702	04/14/99	28						

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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		TERRA-MAR,			
-	ECHNICAL ENVIR				
	FORT WORTH				
11050 Able	s Lane, Dallas, Te	as 75229 F	hone:972-488-	8800 Fax: (972	9)488-8080
	STABILIZ	ED SOIL GRA	DATION REPO	RT	
CLIENT:	Ed Bell Construction			DISTRIBUTION:	
PROJECT:	Arapaho Road Improv	rements		Ed Bell Construct	ion - Doug Teter
REPORT DATE:	•				- Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-111			Town of Addison	- James Pierce, P.E.
				Town of Addison	- Dave Wilde
			· · · · · · · · · · · · · · · · · · ·		
Test Method:			Technician:	Bob Pink	
Minimum % Pas	ising 1 3/4" Sieve:	100	Date Tested:	03/22/99	······································
Minimum % Pas	sing No. 4 Sieve:	60 5	Stabilizing Agent	Lime	
				PERCENT	PERCENT
TEST NUMBER		LOCATION		PASSING 13/4" SIEVE	PASSING #4 SIEVE
1	Araphao Road, west b			100	68.5
2	Araphao Road, west b			100	67.6
3	Araphao Road, east b			100	69.0
			·······		
		·····			
		······································	······		

			<u>2011:1</u>		
Remarks:					

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TERRA-MAR, INC. _____

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		TERRA-MAR	R, INC.			
				TERIALS ENGINEER	S	
				88-8800 Fax: 972-488-808	0	
	CONCRETE INS	PECTION AND) COMPRES	SION TEST REPORT		
CLIENT:	Ed Bell Construction		REPORT DIS	TRIBUTION:		
PROJECT:	PROJECT: Arapaho Road Improvements Ed Bell Construction - Doug Teter					
REPORT DATE:						
TMI REPORT #:	t: DC98-050-102 Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde					
SPEC	IFICATIONS			PROJECT	DATA	
Strength (psi):	3000			Placement Date:	03/03/99	
Slump (in.):	4			Sampled By:		
Air Content (%):			Weather: Sunny/Clo			
Concrete Temp (°F)):			Supplier/Mix:	Lattimore	
		FIELD DA	TA SET #1	••••••••••••••••••••••••••••••••••••••		
Ticket #:		Time Batched:	۱ 	Time Sampled:	4:05	
Slump (in.):	4 1/2	Air Content:		Unit Weight (pcf): Yardage (c.y.):		
Conc. Temp. (°F):	<u>68</u> Arr	bient Temp. (°F):	74	Yardage (c.y.):	5	
	: From Arapho to Quorur	n light		····		
Remarks:		····		·····		
			TA SET #2		· · · · · · · · · · · · · · · · · · ·	
Ticket #:		Time Batched:	······································	_ Time Sampled:	······································	
Slump (in.):		Air Content:	·····			
Conc. Temp. (°F):		bient Temp. (°F):		_ Yardage (c.y.):		
Placement Location	l:					
Remarks:	······································				·····	

	CONCRETE COMPRESSION TEST RESULTS										
CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617											
Set #	Set # Cylinder # Test Date Age (Days) Max. Load (lbs) Area (sq. in.) Strength (psi) FC Notes										
1	AR030301	03/10/99	7	118610	28.27	4200	υ				
	AR300302	03/10/99	7	113410	28.27	4010	U				
	AR030303	03/31/99	28	138070	28.27	4880	U				
	AR300304	03/31/99	28	137330	28.27	4860	υ	······································			
ļ											

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Juny TERRA-MAR, Inc.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: Ed Bell Construction REPORT DISTRIBUTION: PROJECT: Arapaho Road Improvements Ed Bell Construction - Doug Teter REPORT DATE: 04/07/99 Huitt-Zollars, Inc. Kenneth Roberts, P.E. TMI REPORT #: DC98-050-103 Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde PROJECT DA					
SPEC	FICATIONS			PROJECT	DATA
Strength (psi): 3000				Placement Date:	03/09/99
Slump (in.):	3-5			Sampled By:	Contractor
Air Content (%):	4-6			Weather:	Partly Sunny
Concrete Temp (°F)	95			Supplier/Mix:	TXI
		FIELD DA	TA SET #1		
Ticket #:	Tir	ne Batched:	10:00	Time Sampled:	10:45
Slump (in.):	3	Air Content:	5.0	Unit Weight (pcf):	
Conc. Temp. (°F):	65 Ambient	Temp. (°F):	70	Yardage (c.y.):	8/8
Placement Location Remarks:	Station 4600 - left sidewalk 1	0'			
		FIELD DA	TA SET #2		· · · · · · · · · · · · · · · · · · ·
Ticket #:	Tir	ne Batched:	••••	Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient	Temp. (°F):	······	Yardage (c.y.):	
Placement Location					
Remarks:				······································	
	CONCRET		SSION TEST		17

		CYLINDERS MO		RED PER ASTM C31					
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes	
	AR030901 AR030902	03/16/99 04/06/99	7 28	89010 124500	28.27 28.27	3150 4400	U U		
								· · · · · · · · · · · · · · · · · · ·	

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TML Results apply only to above tests.

Sury TERRA-MAR Inc.

GEOTECHNICAL, ENVIRONMENTAL, AND CONSTRUCTION MATERIALS TESTING Dallas Fort Worth Houston Lubbock Longview Austin 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

DAILY ACTIVITY OBSERVATION REPORT

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements PROJECT NO .: DC98-050-109 **REPORT DATE: 3/25/99**

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

On 3/22/99, Terra-Mar, Inc. representative Donald Bell was present at the above referenced project to perform lime depth testing. The following results are as noted.

- Lime at 6" depth Approved Station 59+75
- Lime at 6" depth Approved Station 64+00
- Station 58+10 Lime at 6" depth - Approved

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dalias, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:	Ed Bell Construction
PROJECT:	Arapaho Road Improvements
REPORT DATE:	3/24/99
TMI REPORT NO .:	DC98-050-110

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Perce	PECIFICATIO nt Compaction: re Content (%):	95+		Date Tested: Technician:	TEST DATA 3/22/99 Donald E. Bell	
mpistu		MATERIAL REFERENCE				
CURVE	TEST				OPTIMUM	MAX. DRY
NO.	METHOD	MATERIAL DESCRIF	PTION		MOISTURE (%)	DENSITY (pcf
1	ASTM D698	Dark Gray and Gray Clay with Grave			16.3	106.2
7	ASTM D699	Lime Treated Brown Clay			36.6	80.6
		IN-PLACE TES	T RESULT	<u>'S</u>		
		DENSITY AND MOISTURE TESTS ARE PER	ASTM D2922	, D3017, RESPE	CTIVELY	
TEST NO.	ELEVATION OR LIFT	LOCATION	REF.	% MOISTURE	DRY DENSITY	% DENSITY
NU.		LOCATION		MOISTURE	DENSIT	DENSITY
1	Grade	Sta. 64 + 00 East Bound Arapaho Rd	. 7	37.7	80.7	100.1
2	Grade	Sta. 59+75 East Bound Arapaho Rd.	7	36.4	80.0	99.3
3	Grade	Sta. 58+1000 East Bound Arapaho R	d. 7	39.5	80.3	99.6
AUGE I.D.:	5429	STD. DENSITY COU	NT: 2617	STD. N		648

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Jul Pe TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

REPO TMI F Stren	JECT: DRT DATE: REPORT #:	Arapaho Road Improvements 03/30/99			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde PROJECT DATA Placement Date: 03/22/99 Sampled By: D. Bell Weather: Sunny/82					
	rete Temp (°F)	98		•		Supplier/Mix:			TXI	
				FIELD DA	TA SET #1					
Ticket #: Slump (in.): Conc. Temp. (°F): Placement Location Remarks:		1267092 2 1/2 76 Station 49 +		Time Batched: Air Content: ient Temp. (°F): id Arapaho Rd. s	5.5 80	Time Sampled: 1:3 Unit Weight (pcf): na				
Ticket #: Slump (in.): Conc. Temp. (°F): Placement Location Remarks:			Amb	FIELD DA Time Batched: Air Content: ient Temp. (°F):	Time Sampled: Unit Weight (pcf):		pcf):			
		YLINDERS MC		RETE COMPRES			PER A	ASTM C617		
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
1	AR032201 AR032202 AR032203 AR032204	03/29/99 04/19/99 04/19/99	7 28 28 hold	103170	28.27	3650	U			

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERRA-MAR, INC.	
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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction		REPORT DISTRIBUTION:				
PROJECT:	Arapaho Road Improveme		Ed Bell Construction - Doug Teter				
REPORT DATE:	03/23/99		Huitt-Zollars, Inc. Kenneth Roberts, P.E.				
TMI REPORT #:	DC98-050-105		Town of Addison - James Pierce, P.E.				
			Town of Addis				
SPECI	FICATIONS		PROJECT DATA				
Strength (psi):	4000			Placement Date:	03/15/99		
Slump (in.):	3-5			Sampled By:	B. Jones		
Air Content (%):	4-6			Weather:	Sunny		
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore		
		FIELD DA	TA SET #1				
Ticket #:	67572	Time Batched:	2:59	Time Sampled:	3:40		
Slump (in.):	3	Air Content:	4.5	Unit Weight (pcf):			
Conc. Temp. (°F):	65 Ambi	ent Temp. (°F):	69	Yardage (c.y.):			
	Piers for traffic lights, NW	& SW corner of	f Arapaho @ A	Addison + 1 pier approx. 15			
Remarks:	Concrete was 1.5 hours la	ite					
		FIELD DA	TA SET #				
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):	······································		
Conc. Temp. (°F):	Ambi	ent Temp. (°F):		Yardage (c.v.):			
Placement Location:		······································					
Remarks:							
* \$56677547655444		····			······································		
		· · · · · · · · · · · · · · · · · · ·		······································	· · · · · · · · · · · · · · · · · · ·		
	CONCR		SSION TEST	RESULTS			

	CONCRETE COMPRESSION TEST RESULTS CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617									
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq, in.)	Strength (psi)	FC	Notes		
1	AR031501 AR031502 AR031503	03/22/99 04/12/99	7 28 hold	148320	28.27	5250	U			

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

lury pe TERRA-MAR, Inc.

Taxee **TOWN OF PUBLIC WORKS** ADDISON To: From: James C. Pierce, Jr., P.E., DEE **CIVIA Assistant City Engineer** Phone: 972/450-2879 C' FAX: 972/450-2834 FAX #: 972-488-8080 16801 Westgrove 3-23-Date:_ P.O. Box 9010 Addison, TX 75001-9010 # of pages (including cover): _____ Re: □ Per your request 🗆 Original in mail □ Call me corrections in ase note MIX **Comments:** tims tor Imo, ACCO CC

	TERRA-MAR, INC. GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN									
	11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800									
CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)										
CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	PROJECT: Arapaho Road Improvements Ed Bell Construction - Doug Teter REPORT DATE: 03/10/99 Huitt-Zollars, Inc Kenneth Roberts, P.E.									
SPECIFICATIONS PROJECT DATA										
Strength (psi);	650 Flex		Placement Date:	02/05/99						
Slump (in.):	-# 3-5		Sampled By:	J. Perez						
Air Content (%):	<u>5-8</u>		Weather:	Cloudy						
Concrete Temp (°F)			Supplier/Mix:	Lattimore						
		FIELD DATA SET #	1							
Ticket #:	65479 Time Bai	ched: 11:20	Time Sampled:	11:45						
Slump (in.):	5.00 Air Co	ntent: 4.5	Unit Weight (pcf):	na						
Conc. Temp. (°F):	70 Ambient Temp	. (°F): 64	Yardage (c.y.):	na						
Placement Location	Median at Quorum Road									
·		FIELD DATA SET #								
Ticket #:	Time Bat	ched:	Time Sampled:							
Stump (in.):	Air Co	ntent:	Unit Weight (pcf):							
Conc. Temp. (°F): Placement Location. Remarks:	Ambient Temp	. (°F):	Yardage (c.y.):							

	CONCRETE COMPRESSION TEST RESULTS									
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes		
				-						
1	AR020501	02/12/99	7	8940	6.00	6,20	745			
	AR020502	02/12/99	7	9060	6.10	6,00	755			
	AR020503	03/05/99	28	9840	5.90	6.10	820			
	AR020504	03/05/99	28	9360	6.05	6.20	780			
HI COAR			A NATES	6 to ma 10*				1 0		

 SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.
 SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERBA MAR, INC.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 03/11/99 DC98-050-102	Ed Bell Constr Huitt-Zollars, I Town of Addis	T DISTRIBUTION: Construction - Doug Teter lars, Inc. Kenneth Roberts, P.E. Addison - James Pierce, P.E.			
	FICATIONS	TOWN OF AUGIS	on - Dave Wilde PROJECT			
Strength (psi): Slump (in.):	<u>3000</u> /C		PROJECT Placement Date: Sampled By:	03/03/99		
Air Content (%):	5-8,		Weather:	Sunny/Clear		
Concrete Temp (°F):	-4 N		Supplier/Mix:	Lattimore		
	FIELD D/	TA SET #1				
Ticket #:	Time Batched		Time Sampled:	4:05		
Slump (in.):	4 1/2 Air Content		Unit Weight (pcf): Yardage (c.y.):			
Conc, Temp, (°F):	68 Ambient Temp. (°F):	74	Yardage (c.y.):	5		
Placement Location: Remarks:	From Arapho to Quorum light					
	FIELD DA	TA SET #2				
Ticket #:	Time Batched		Time Sampled:			
Slump (in.):	Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):	Ambient Temp. (°F):	····	Yardage (c.y.):			
Placement Location:						
Remarks:						

Set #	Cylinder #	Test Date		RED PER ASTM C31, Max. Load (lbs)				Notes
1	AR030301	03/10/99	· 7	118610	28.27	4200	U	
	AR300302	03/10/99	7	113410	28.27	4010	U	
	AR030303	03/31/99	28					
	AR300304	03/31/99	28					······································

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERNA-MAR, Inc.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Constructio Arapaho Road Impr 03/18/99 DC98-050-103	rapaho Road ImprovementsEd Bell Construction - Doug Teter8/18/99Huitt-Zollars, Inc. Kenneth Roberts, P.E.C98-050-103Town of Addison - James Pierce, P.E.Town of Addison - Dave Wilde					
SPECI	FICATIONS			PROJECT	Γ DATA		
Strength (psi):	3000			Placement Date:	03/09/99		
Slump (in.):	3-5			Sampled By:	Contractor		
Air Content (%):	4-6			Weather:	Partly Sunny		
Concrete Temp (°F)	95	Supplier/Mix:					
·······		FIELD DA	TA SET #1				
Ticket #:		Time Batched:	10:00	Time Sampled:	10:45		
Slump (in.):	3	Air Content:	5.0	Unit Weight (pcf):			
Conc. Temp. (°F):	65	Ambient Temp. (°F):	70	Yardage (c.y.):	8/8		
Placement Location Remarks:	Station 4600 - left s	idewalk 10'					
		FIELD DA	TA SET #2				
Ticket #:		Time Batched:	x	Time Sampled:			
Slump (in.):		Air Content: Unit Weight (po					
Conc. Temp. (°F);		Ambient Temp. (°F):		Yardage (c.y.):			
Placement Location:							
Remarks:							

	CONCRETE COMPRESSION TEST RESULTS									
Set #	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617 Set # Cylinder # Test Date Age (Days) Max. Load (lbs) Area (sq. in.) Strength (psi) FC Notes									
1	AR030901 AR030902	03/16/99 04/06/99	7 28	89010	28.27	3150	U			

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Juny J. Jrg. Mar. Inc.

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	TERRA-MAR, IN	C.		
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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	03/18/99	Huitt-Zollars, Inc. Kenneth Roberts, P.E.
TMI REPORT #: DC98-050-104		Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde
SPEC	IFICATIONS	PROJECT DATA

Strength (psi): 3000				Placement Date:	03/10/99
Slump (in.):	3-5			Sampled By:	Contractor
Air Content (%):	4-6			Weather:	Partly Sunny
Concrete Temp (°F)	95			Supplier/Mix:	TXI
		FIELD DAT	A SET #1		
Ticket #:		Time Batched:	12:00	Time Sampled:	12:32
Slump (in.):	3	Air Content:	4.5	Unit Weight (pcf):	
Conc. Temp. (°F):	65	Ambient Temp. (*F):	73	Yardage (c.y.):	10/20
Placement Location:	Station 65 + 0	0, right 25			
Remarks:				······································	
		FIELD DAT	A SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):	
Placement Location:					· · · · · · · · · · · · · · · · · · ·
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS									
Set #	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617 Set # Cylinder # Test Date Age (Days) Max. Load (Ibs) Area (sq. in.) Strength (psi) FC Notes									
1	AR031002 AR031003	03/17/99 04/07/99	7 28	101930	28.27	3610	υ			

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Jurry L. For TERRA-MAR, Pe

				TER	RRA-MAR,	INC.			
			FORT V	s Lane, Dallas			LUBBOCK AU 72-488-8800	SHN	
	~			*	,				-
	U U	UNUKEI	: INOPE		POINT LC		GTH TEST F	(EPUK I	
CLIENT:Ed Bell ConstructionREPORT DISTRIBUTION:PROJECT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterREPORT DATE:03/10/99Huitt-Zollars, Inc Kenneth Roberts, P.E.TMI REPORT #:DC98-050-98Town of Addison - James Pierce, P.E.Town of Addison - Dave WildeTown of Addison - Dave Wilde									
Slum Air Co	SPECIFICATIONS PROJECT DATA Strength (psi): 650 F1ex Placement Date: 02/05/99 Slump (in.): 5 3 - 5 Sampled By: J. Perez Air Content (%): 5 - 8 Weather: Cloudy Concrete Temp (°F): Supplier/Mix: Lattimore								
				FIE	LD DATA SE	T #1			
Ticke						*	Time Sample		
	p (in.):	5.00	Ambion	Air Content:	WW-1-1-1				na na
	Temp. (°F): ment Location			it Temp. (°F): oad	04	w	raiuage (c.y	.): 	
									·····
					LD DATA SE				
Ticket		·····	_ Ti	ime Batched:	····	•	Time Sample	d:	
•	o (in.):		_	Air Content:		"	onir Maiður (be	IJ.	
	. Temp. (°F): ment Location arks:	• • •	Amplen	t Temp. (°F):		*	Yardage (c.y	.):	·····
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes	
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)		
Mu Annu	····								

1 AR020501 02/12/99 7 8940 6.00 6.20 745 02/12/99 7 9060 755 AR020502 6.10 6.00 AR020503 03/05/99 28 9840 5,90 6.10 820 780 AR020504 03/05/99 28 9360 6.05 6.20

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.
 (2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
 (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

TERBAMAR, INC.

	TERRA-MAR, IN	IC.		
OTFOUNDAL	THIS REPORT AT	A 1 1 1	NA TEDIAL	~

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

REPO	NT: JECT: DRT DATE: REPORT #:	CT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterRT DATE:03/11/99Huitt-Zollars, Inc. Kenneth Roberts								
	SPECI	FICATIONS	<u></u>		PROJECT DATA					
Stren	gth (psi):	3000				Placement Da	ite:	0	3/03/99	
	o (in.):	1	3-5	-		Sampled By:				
	ontent (%):		5-8	•		Weather:		Su	nny/Clear	
	ete Temp (°F).	*		-		Supplier/Mix:		La	attimore	
				FIELD DA	TA SET #1					
Ticket	#			Time Batched:		Time 5	Sampled	:	4:05	
	o (in.):	4 1/2	•	Air Content:		Unit Wei	aht (pcf)			
	Temp. (°F):	68	Amb	ient Temp. (°F):	74	Yarda	ae (c.v.)	* *	5	
	ment Location:		io to Quorum	liaht		-	3+ (+•)•)	*		
Rema									·····	
					TA SET #2					
Ticke	+ <u>-</u> #+			Time Batched:		Time S	Samoled	•		
	o (in.):		•	Air Content		Unit Wei	aht (ncf)			
	Temp. (°F):		Amb	pient Temp. (°F):		Yarda	de (c.v.)	*		
	ment Location:			none romp. (r y.			90 (0.9.)	·		
Rema			··· ···	······						
	53 E 95wr 4								······	
			CONCI	RETE COMPRES	SSION TEST R	ESULTS				
		YLINDERS MC	LDED AND CUF	RED PER ASTM C31,	TESTED PER AST	TM C39, CAPPED	PER ASTA	A C617		
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
1	AR030301	03/10/99	7	118610	28.27	4200	υ			

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE. (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

7

28

28

113410

28.27

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

03/10/99

03/31/99

03/31/99

AR300302

AR030303

AR300304

TERMA-MAR, Inc.

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DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:Ed Beil ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:03/10/99TMI REPORT #:DC98-050-99

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method:		Technician:	M. Kashem	
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	02/26/99	
Minimum % Passing No. 4 Sieve:	60	Stabilizing Agent	Lime	

		PERCENT PASSING	PERCENT PASSING
TEST NUMBER	LOCATION	1 04" SIEVE	#4 SIEVE
1	Araphao Road, east bound @ 41 + 50	100	67.9
2	Araphac Road, east bound @ 42 + 50	100	66.5
3	Section of new pavement @ old Arapaho @ east bound	100	68.5
		······································	
		-******	
······			
······································			
••••••••••••••••••••••••••••••••••••••			- -
·····		-t	
Remarks:			· · · · · · · · · · · · · · · · · · ·

ERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

Fort Worth Houston Austin Longview Lubbock Dallas

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client: Ed Bell Construction

Project: Arapaho Road Improvements **Distribution:** Ed Bell Construction - Doug Teter

Report No.: DC98-050-101 Report Date: 02/26/99

LIME TREATED SOIL DEPTH CHECKS DEPTH TEST NO. LOCATIONS fun} East Bound Arapaho Rd @ 41 +00 8.0" 1 2 East Bound Arapaho Rd @ 42 +00 7.5" 8.0" 3 Section of new pavement @ Old Arapaho Rd @ east bound

ERRA-MAR, INC

	DALLAS F		ISTON LO	ONGVIEW	LUBBOCK AUSTI	
C		0 Ables Lane, Dallas, NSPECTION AND (THIRD I		AL STREM		ORT
CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Constr Arapaho Road 02/24/99 DC98-050-98			Ed Bell Con Huitt-Zollars Town of Ad	ISTRIBUTION: Istruction - Doug Tete s, Inc Kenneth Rob dison - James Pierce dison - Dave Wilde	erts, P.E.
SPECIF Strength (psi): Slump (in.): Air Content (%): Concrete Temp (°F)	1CATIONS 650 5 4				PROJ Placement Date: Sampled By: Weather: Supplier/Mix:	ECT DATA 02/05/99 J. Perez Cloudy Lattimore
4		FIEL	D DATA SE	T #1		
Ticket #: Slump (in.): Conc. Temp. (°F): Placement Location		Time Batched: Air Content: mbient Temp. (°F): rum Road	11:20 4.5 64		Time Sampled: Unit Weight (pcf): Yardage (c.y.):	na
		FIELI	D DATA SE	T #2		-
Ticket #: Slump (in.): Conc. Temp. (°F): Placement Location Remarks:		Time Batched: Air Content: mbient Temp. (°F):			Unit Weight (pcf):	

BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes		
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)			
	6 D000204	0040000	-7	2040		~ ~~				
1	AR020501	02/12/99	7	8940	6.00	∕ 6 .20	√745			
	AR020502	02/12/99	7	9060	6.10	6.00	755			
	AR020503	03/05/99	28		đ					
	AR020504	03/05/99	28							
			γ							
					-					

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Juny For VE JERRA-MAR, INC.





Consulting Engineers - Geotechnical - Environmental - Construction Materials Testing

AUSTIN . DALLAS . FORT WORTH . HOUSTON . LONGVIEW

Certified Mail # P 572 663 477 Registered, Return Receipt Requested

January 29, 1999

Mr. Robert Weber Mr. Pat Rivera Ed Bell Construction Company 10605 Harry Hines Boulevard Dallas, Texas 75220

RE: Demand for Payment Project DC98-050 Invoice # DC8050923 - 9/30/98 Invoice # DC80501015 - 10/31/98 Invoice # DC80501115 - 11/30/98

Dear Mr. Weber and Mr. Rivera:

Terra-Mar, Inc. has provided Construction Materials Services on Project #DC98-050 as shown on the following invoices:

Invoice # DC8050923 - 09/30/98 in the amount of \$6,260.00 Invoice # DC80501015 - 10/31/98 in the amount of \$1,770.00 Invoice # DC80501115 - 11/30/98 in the amount of \$1,645.00

As of today, the total amount due on these invoices is \$9,675.00. This amount does not include additional additional payments due for any work that may have been completed in 1998 or January 1999.

As of this date, our records reflect no payment or partial payment having been received from Ed Bell Construction Company. Therefore, demand is hereby made upon you for payment of \$9,675.00 This amount is to be paid directly to Terra-Mar within ten (10) days of your receipt of this letter. Should such payment not be forthcoming or other arrangements made for the satisfaction of this obligation, we may have no other option than to seek whatever legal remedies are available. Should such a step become necessary, Terra-Mar will seek recovery of the principal amount owed, interest, attorney's fees, and court costs.

If payment has already been sent, please disregard this letter.

Sincerely,

TERRA-MAR. INC.

K. Fr

Brit Jennings Controller

Attachments: Invoice Copies

C: James C. Pierce, Jr., P.E. Assistant City Engineer Town of Addison





CONSULTING ENGINEERS * GEOTEC ... AICAL * ENVIRONMENTAL * CONSTRUCTION MATERIALS ENGINEERS

11050 Ables Lane, Dallas, Texas 75229

Phone: (972) 488-8800 Fax: (972) 488-8080

DALLAS FORTWORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

INVOICE

TO: Ed Bell Construction	INVOICE	INVOICE
P.O. Box 540787	DATE	NUMBER
Dallas, Texas 75354-0787	9/30/98	DC8050923
ATTN: Mr. Troy Childers	••••••	

FAX NO.: 214-352-3201 PROJECT #: DC98-050 **PROJECT:** Arapaho Road Improvements

PHONE NO .: 214-358-6581

Total Amount Due

\$ 6,260.00

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Period of

September 1, 1998 to September 30, 1998 Service:

सन्दर्भाषत अद्यागितन्द्र	TICH	OATE.	IDESGRIPTION	510/31V			AMOUNT
and the second	i in <u>1997 portunitations</u>	and the state of t					
57	MK	9/1	In-Place Densities	5.00	each	10.00	50.00
58	MK	9/1	Field Gradations	2.00	each	10.00	20.00
			Technician Time (am)	4.00	hours	28.00	112.00
			Transportation Charge	1.00	trip	15.00	15.00
59	MK	9/1	Lime Depth Checks	8.00	each	10.00	80.00
60	MK	9/1	Field Gradations	2.00	each	10.00	20.00
		971	Technician Time (pm)	2.00 4.00	hours	28.00	112.00
		12				15.00	15.00
			Transportation Charge	1.00	. trip		t i i i i i i i i i i i i i i i i i i i
61	MK	9/2	Proctor #7	1.00	each	120.00	120.00
₽		ŧ	Atterberg Limits	1.00	each	40.00	40.00
62	BG	9/2	Flexural Beams	8.00	each	20.00	160.00
а		u A	Technician Time	6.00	hours	28.00	168.00
8			Transportation Charge	1.00	trip	15.00	15.00
63	MK	9/2	In-Place Densities	7.00	each	10.00	70.00 70.00
64 "	MK	9/2	Field Gradations	7.00	each	10.00 28.00	168.00
19 18			Technician Time	6.00	hours	28.00 15.00	15.00
			Transportation Charge	1.00	trip	10.00	80.00
65	MK	9/3	Field Gradations	8.00	each	10.00	40.00
66	MK	9/3 "	In-Place Densities	4.00	each	28.00	112.00
			Technician Time	4.00	hours	15.00	15.00
		9/3	Transportation Charge	1.00 4.00	trip each	20.00	80.00
67	JS	9/3	Technician Time (1st trip)	4.00	hours	28.00	112.00
		в	Transportation Charge	1.00	trip	15.00	15.00
68	мк	9/2	Field Gradations	4.00	each	10.00	40.00
00 *	19117	972 18	Technician Time (pm)	4.00	hours	28.00	112.00
*	14	u	Transportation Charge	1.00	trip	15.00	15.00
69	JS	9/3	Flexural Beams	4.00	each	20.00	80.00
*	*	10	Technician Time (2nd trip)	3.00	hours	28.00	84.00
8	43	41	Transportation Charge	1.00	trip	15.00	15.00
70	EE	9/4	Flexural Beams	12.00	each	20.00	240.00
в		4	Technician Time	8.00	hours	28.00	224.00
18	n	ri	Transportation Charge	1.00	trip	15.00	15.00

age (#e) Agesta		્રગ્રહ નાર્ક્ષ	Calification		MENE	্রন্দ শ্বন্দের	AMOURS.
71	JS	9/8	Flexural Beams	8.00	each	20.00	160.00
		N	Technician Time	8.00	hours	28.00	224.00
		-	Transportation Charge	1.00	trip	15.00	15.00
72	JS	9/9	Flexural Beams	12.00	each	20.00	240.00
	*	-	Technician Time	8.00	hours	28.00	224.00
	*	N	Transportation Charge	1.00	trip	15.00	15.00
73	BG	9/10	Flexural Beams	4.00	each	20.00	80.00
, si	#		Technician Time	4.00	hours	28.00	112.00
*	*	*	Transportation Charge	1.00	trip	15.00	15.00
		9/11	Beam Pickup Time	2.00	hours	28.00	56.00
		N	Transportation Charge	1.00	trip	15.00	15.00
74	JS	9/21	Flexural Beams	8.00	each	20.00	160.00
	n	A	Technician Time	8.00	hours	28.00	224.00
n	*	F	Transportation Charge	1.00	trip	15.00	15.00
75	JS	9/22	Flexural Beams	8.00	each	20.00	160.00
	я	¥	Technician Time	8.00	hours	28.00	224.00
		N	Transportation Charge	1.00	trip	15.00	15.00
76	JS	9/23	Flexural Beams	12.00	each	20.00	240.00
i U		*	Technician Time	8.00	hours	28.00	224.00
		#	Overtime	4.00	hours	42.00	168.00
-	п	14	Transportation Charge	1.00	trip	15.00	15.00
77	JS	9/24	Flexural Beams	8.00	each	20.00	160.00
3 T 31	14		Technician Time	8.00	hours	28.00	224.00
M	11	*	Overtime	2.00	hours	42.00	84.00
×	+1	Ħ	Transportation Charge	1.00	trip	15.00	15.00
78	JS	9/25	Flexural Beams	4.00	each	20.00	80.00
*	9 0	19	Technician Time	4.00	hours	28.00	112.00
*	8	j#	Transportation Charge	1.00	trip	15.00	15.00
	YL	9/30	Project Management	8.00	hours	55.00	440.00
			erms of contract.			TOTAL	6,260.00
2. Incluc ank You, We			or number with payment. Ir business.	<u>I</u>	MANAGER		M

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Consulting Engineers * Geotechnical * Environmental * Construction Materials Engineers 11050 Ables Lane, Dallas, Texas 75229

Phone: (972) 488-8800 Fax: (972) 488-8080

Dallas Fort Worth Austin Houston Longview Lubbock

INVOICE

TO: Ed Bell Construction P.O. Box 540787	INVOICE DATE	INVOICE NUMBER
Dallas, Texas 75354-0787	10/31/98	DC80501015
ATTN: Mr. Troy Childers		
PHONE NO.: 214-358-6581		

FAX NO.: 214-352-3201 PROJECT #: DC98-050 PROJECT: Arapaho Road Improvements

Total Amount Due \$ 1,770.00

Period of

Service: October 1, 1998 to October 31, 1998

	TEGU		DESCRIPTION	OUANT			AMOUNT
	 A state of the sta	••••••••					
79	BWG	10/13	Flexural Beams	4.00	each	20.00	80.00
P	8	p	Technician Time	4.00	hour	28.00	112.00
ĨŢ			Transportation Charge	1.00	trip	15.00	15.00
80	BWG	10/14	Flexural Beams	4.00	each	20.00	80.00
н	Ħ	18	Technician Time	4.00	hour	28.00	112.00
ŧ	18	3±	Transportation Charge	1.00	trip	15.00	15.00
	BWG	10/15	Beam Pickup Time	2.00	hour	28.00	56.00
			Transportation Charge	1.00	trip	15.00	15.00
81	мк	10/16	Flexural Beams	4.00	each	20.00	80.00
"	11	"	Technician Time	4.00	hour	28.00	112.00
\$}) (Transportation Charge	1.00	trip	15.00	15.00
	MK	10/17	Beam Pickup Time	2.00	hour	28.00	56.00
	a a a a a a a a a a a a a a a a a a a	4) 102 1 1	Transportation Charge	1.00	trip	15.00	15.00
82	JP	10/19	Flexural Beams	12.00	each	20.00	240.00
	11		Technician Time	6.00	hour	28.00	168.00
8	u	u	Transportation Charge	1.00	trip	15.00	15.00
	JP	10/20	Beam Pickup Time	2.00	hour	28.00	56.00
	щ	11	Transportation Charge	1.00	trip	15.00	15.00
83	MY	10/29	Drilled Cores for Compressive	4.00	each	55.00	220.00
17	4	16	Technician Time	3.00	hour	28.00	84.00
HT.	JS	10/29	2nd Technician Time	3.00	hour	28.00	84.00
in .	3 K	1¥	Transportation Charge	1.00	trip	15.00	15.00
	YL	10/31	Project Management	2.00	hour	55.00	110.00
						TOTAL	1,770.00
			y terms of contract.				
2. Inclu	ude inv	oice cop	by or number with payment.				

Thank You, we appreciate your business.

MANAGER APPROVAL

TERRA-MAR, INC.

Consulting Engineers * Geotechnical * Environmental * Construction Materials Engineers

11050 Ables Lane, Dallas, Texas 75229

Phone: (2972-488-8800 Fax: (972) 488-8080

Dallas Forth Worth Austin Houston Longview Lubbock

INVOICE

TO: Ed Bell Construction P.O. Box 540787	INVOICE DATE	INVOICE NUMBER
Dallas, Texas 75354-0787	11/30/98	DC80501115
ATTN: Mr. Troy Childers		
PHONE No.: 214-358-6581		
FAX NO.: 214-352-3201	Total Amoun	t

PROJECT #: DC98-050

PROJECT: Arapaho Road Improvements

Period of

Service: November 1, 1998 to November 30, 1998

REPORT	TECH	DATE	DESCRIPTION	QUANT	MEASURE		
84	EE	11/6	Flexural Beams	4.00	each	20.00	80.00
*)	ii ii	8	Technician Time	4.00	hours	28.00	112.00
84	μ	ar	Transportation Charge	1.00	trip	15.00	15.00
88	EE	11/7	Beam Pickup Time	3.00	hours	28.00	84.00
11	ŧ	u	Transportation Charge	1.00	trip	15.00	15.00
85	MK	11/13	Daily Activity Report	4.00	hours	28.00	112.00
11	6	Ħ	Transportation Charge	1.00	trip	15.00	15.00
86	мк	11/17	In-Place Densities (min 4 per trip)	4.00	each	10.00	40.00
11	u	tir .	Technician Time	3.00	hours	28.00	84.00
11	11	¢	Transportation Charge	1.00	trip	15.00	15.00
87	мк	11/16	Field Gradations (min 4 per trip)	4.00	each	15.00	60.00
"	ii ii	н	Technician Time	3.00	hours	28.00	84.00
1P	ŧ	.11	Transportation Charge	1.00	trip	15.00	15.00
88	EE	11/25	Flexural Beams	4.00	each	20.00	80.00
	H H	48	Technician Time	6.00	hours	28.00	168.00
	н	57	Transportation Charge	1.00	trip	15.00	15.00
B	EE	11/27	Beam Pickup Time	3.00	hours	28.00	84.00
< B	9X	ŧI	Transportation Charge	1.00	trip	15.00	15.00
89	MK	11/30	Flexural Beams	8.00	each	20.00	160.00
4L	21	¥4	Technician Time	6.00	hours	28.00	168.00
47	99	н	Transportation Charge	1.00	trip	15.00	15.00
FI.	EE	12/1	Beam Pickup Time	3.00	hours	28.00	84.00
II		18	Transportation Charge	1.00	trip	15.00	15.00
	JY	11/30	Project Management	2.00	hours	55.00	110.00
						TOTAL	1,645.00
Note: 1. Due on		-					1
2. Include	invoice c	opy or nu	imber with payment.	A-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			111

Thank You, We appreciate your business.

MANAGER APPROVAL

\$ 1,645.00

Due

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax; 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction		REPORT DISTRIBUTION:						
PROJECT:	Arapaho Road Imp	provements	Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E.						
REPORT DATE:	1/8/99								
TMI REPORT #: DC98-050-91			Town of Addison - James Pierce, P.E.						
			Town of Add	ison - Dave Wilde					
SPECI	FICATIONS		PROJECT DATA						
Strength (psi):	4000			Placement Date:	12/8/98				
Slump (in.):	3-5			Sampled By:	Chris Theriot				
Air Content (%):	na			Weather:	Clear				
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore				
		FIELD DA	TA SET #1						
Ticket #:	662157	Time Batched:	9:34	Time Sampled:	10:30				
Slump (in.):	2.00	Air Content;	na	Unit Weight (pcf):	na				
Conc. Temp. (°F):	60	Ambient Temp. (°F):	52	Yardage (c.y.):	7				
Placement Location:	Four area inletts								
Remarks:									
		FIELD DA	TA SET #2						
Ticket #:		Time Batched:		Time Sampled:					
Slump (in.):		Air Content:							
Conc. Temp. (°F):		Ambient Temp. (°F):							
Placement Location:				<u> </u>					
Remarks:									

	*****		CONC		SSION TEST R	ESULTS		
	c	YLINDERS MO	LDED AND CUP	RED PER ASTM C31,	TESTED PER AST	rm C39, CAPPED	PER /	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	AR120801	1/5/99	28	174780	28.27	6180	υ	
	AR120802	1/5/99	28	173070	28.27	6120	U	
l								

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Surry L. For por TERRA-MAR, Inc.

				ENVIRON		ND MATER	RIALS ENGIN			
				s Lane, Dallas	•					
	C	ONCRETE	: INSPE		D FLEXUR POINT LC		GTH TEST F	EPORT		
REPC	NT: JECT: DRT DATE: REPORT #:	Ed Bell Construction Arapaho Road Improvements 1/8/99 DC98-050-92				REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde				
l'illing	SPECIFI	ICATIONS					Pſ	ROJECT DATA		
Streng	gth (psi):	550	550				Placement Date:			
Slump	p (in.):	4		-			Sampled By:	John Sullivan		
	ontent (%):	5		• ••			Weather:	Cloudy & cool		
Concr	rete Temp (°F):	,		~			Supplier/Mix:	Lattimore		
				FIE	LD DATA SE	T #1				
Ticket	t #:	7062751	Т	ime Batched:			Time Sample	d: 1:15		
	p (în.):	4.00	•	Air Content;		, I	Unit Weight (pcl			
-	Temp. (°F):	65	Ambien	it Temp. (°F):		٠	Yardage (c.y.):			
	ment Location:	West inters	-			eft turning lan				
									····	
				FIE	LD DATA SE	Τ #2				
Ticket	ł #·		T	ime Batched:	Louise har and a set of the horizont	1 XX	Time Sample	d:		
	p (in.):		•	Time Batched: Air Content:			Unit Weight (pcf):			
•	Temp. (°F):		Ambien	it Temp. (°F):						
	ment Location:					,	····- • • • •	····		
Rema										
				NCRETE CO						
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes		
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)			
				[]						
	APR120901	12/16/98	7	8160	6.10	6.00	680			
1	APR120902	12/16/98	7	9300	6.20	6.10	775	,		
1	APR120903	1/6/99	28	9660	5,95	6.15	805			
	APR120904	1/6/99	28	1008	6.00	6.00	840	, I		
	AFR120904	170/55		1000	0.00	0.00		······································	<u></u>	
-										

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.
 (2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
 (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. Formers

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE:	Ed Bell Construct Arapaho Road Im 1/6/99		Ed Bell Cons	EPORT DISTRIBUTION: d Bell Construction - Doug Teter uitt-Zollars, Inc. Kenneth Roberts, P.E.				
TMI REPORT #:	DC98-050-90			Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde				
SPEC	FICATIONS			PROJECT	DATA			
Strength (psi):	3000			Placement Date:	12/8/98			
Slump (in.):	5			Sampled By:	A. Johnson			
Air Content (%):	na			Weather:	Clear			
Concrete Temp (°F)	95			Supplier/Mix:	Lattimore #38			
		FIELD DA	TA SET #1					
Ticket #:	6085991	Time Batched:	1:57	Time Sampled:	4:00			
Slump (in.):	3.00	Air Content:	na	Unit Weight (pcf):	na			
Conc. Temp. (°F):	69	Ambient Temp. (°F):	70	Yardage (c.y.):	5			
Placement Location	: Arapaho Road lig	ht pole piers						
Remarks:			<u></u>					
		FIELD DA	TA SET #2					
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		Unit Weight (pcf):				
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):				
Placement Location								
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS									
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617									
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
	AR120801	12/15/98	7	108210	28.27	3830	U			
1	AR120801	1/5/99	28	147370	28.27	5210	U			
	AR120801	1/5/99	28	150530	28.27	5320	U			
	AR120801	DISCARD								

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Serry L. For year TERRA-MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:12/29/98TMI REPORT #:DC98-050-89		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Rober Town of Addison - James Pierce, Town of Addison - Dave Wilde	rts, P.E.
SPECI	FICATIONS	PROJE	CT DATA
Strength (psi):	650 Flex	Placement Date:	11/30/98
Slump (in.);		Sampled By:	M. Kashem

Concrete Temp (°F)):		Supplier/Mix:	Lattimore	
********		FIEL	D DATA SET #	1	
Ticket #:	3074204	Time Batched:	8:11	Time Sampled:	9:35
Slump (in.):	mp (in.): 4.00 Air Content: 5.1 Unit Weight			Unit Weight (pcf):	
Conc. Temp. (°F):	66	Ambient Temp. (°F):	60	Yardage (c.y.):	9
Placement Location					
	station 21+	75			
		FIEL	D DATA SET #	2	
Ticket #:	3074216	Time Batched:	10:18	Time Sampled:	11:30
Slump (in.):	3.50	Air Content:	4.6	Unit Weight (pcf):	
Conc. Temp. (°F):	70	Ambient Temp. ("F):	64	Yardage (c.y.):	54
Placement Location	: Paving @ (Quaroun Rd. S. bound @	station 2+55		
Remarks:					

Weather:

Clear

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
	ARI113001	12/07/98	7	6840	6.05	6.15	570				
1	ARI113002	12/07/98	7	7080	6.00	6.25	590				
	ARI113003	12/28/98	28	8160	6.00	6.20	680				
	ARI113004	12/28/98	28	8340	5.85	6.25	695				
2	ARI113005	12/07/98	7	7980	5.90	6.15	665				
	ARI113006	12/07/98	7	8880	6.00	6.25	740				
	ARI113007	12/28/98	28	9120	6.00	6,10	760				
	ARI113008	12/28/98	28	9060	6.00	6.20	755				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

Air Content (%):

4-6

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

ÍERRA-MAR,

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIEN		Ed Bell Construction Arapaho Road Improvements			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter				
PROJE		•	ad Improvements						
	RT DATE:	12/17/98	~		Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E.				
TMIRE	EPORT #:	DC98-050-9	2						
					Town of Add	dison - Dave Wild	e		
	SPECIFI	CATIONS			PROJECT DATA				
Strengt	th (psi):	550				Placement Date):	12/09/98	
Slump	(in.):	4				Sampled By:	JC	ohn Sullivan	
Air Cor	ntent (%):	5				Weather:		Cloudy	
Concre	te Temp (°F):					Supplier/Mix:		On site	
			FIE	LD DATA S	ET #1				
Ticket a	#:	7062751	Time Batched:	12:57		Time Sampled		1:15	
Slump						Unit Weight (pcf):	*	na	
Conc	Temp. (°F):	65	Ambient Temp. (°F):	54	Yardage (c.y.): na				
Placem	nent Location:	West interse	ction of Quorum Road	and Arapah	o, left tum lan	18			
			***************************************					******	
				LD DATA S					
Ticket a	#:		Time Batched:			Time Sampled	•		
Slump	(in.):		Air Content:			Unit Weight (pcf)	*		
Conc. 1	ľemp. (°F):		Ambient Temp. (°F):			Yardage (c.y.)	*		
Placem	ent Location:		-						
Remarl	KS:				······································				
			CONCRETE CO	MPRESSIO	N TEST RESU	ULTS			
		E	BEAMS MOLDED AND CURI	ED PER ASTM	C31, TESTED PI	ER ASTM C78			
Set #	Beam #	Test Date	Age Max. Load	Average	Average		Notes		

Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)	
1	APR120901 APR120902 APR120903	12/16/98 12/16/98 01/06/99	7 7 28	8160 9300	6.10 6.20	6.00 6.10	680 775	
	APR120904	01/06/99	28					
2								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. For Pr JERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction REPORT DISTRIBUTION:							
PROJECT:	Arapaho Road Improvem	ients	Ed Bell Const	ruction - Doug Teter				
REPORT DATE:	12/16/98		Huitt-Zollars,	Inc. Kenneth Roberts, P.E.				
TMI REPORT #:	DC98-050-90		Town of Addis	son - James Pierce, P.E.				
			Town of Addi	son - Dave Wilde				
SPEC	IFICATIONS			PROJECT	'DATA			
Strength (psi):	3000			Placement Date:	12/08/98			
Slump (in.):	5			Sampled By:	A. Johnson			
Air Content (%):	na			Weather:	Clear			
Concrete Temp (°F):	95			Supplier/Mix:	Lattimore #38			
	·····	FIELD DA	ATA SET #1					
Ticket #:	6085991	Time Batched:	1:57	Time Sampled:	4:00			
Slump (in.):	3.00	Air Content:	na	Unit Weight (pcf):	па			
Conc. Temp. (°F):	69 A	Ambient Temp. (°F):	70	Yardage (c.y.):				
Placement Location:	Arapaho Road light pole	piers						
Remarks:								
		FIELD DA	ATA SET #2		••••			
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		Unit Weight (pcf):				
Conc. Temp. (°F):	A	mbient Temp. (°F):		Yardage (c.y.):				
Placement Location:		· · ·			·····			
Remarks:		······································						

	CONCRETE COMPRESSION TEST RESULTS										
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
	AR120801	12/15/98	7	108210	28,27	3830	υ				
1	AR120801	01/05/99	28								
	AR120801	01/05/99	28								
	AR120801		hold								

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jussy L F

DALLAS	FORT WOR	TH HOUSTO	N LONGVIEW	/ LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	ROJECT: Arapaho Road Improvements EPORT DATE: 12/14/98 MI REPORT #: DC98-050-89			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde				
SPECIFI	CATIONS			PRO	ECT DATA			
Strength (psi):	650 Flex			Placement Date:	11/30/98			
Slump (in.):				Sampled By:	M. Kashem			
Air Content (%):	4-6			Weather:	Clear			
Concrete Temp (°F):		······		Supplier/Mix:	Lattimore			
	FIELD DATA SET #1							
Ticket #:	3074204	Time Batched:	8:11	Time Sampled:	9:35			
Slump (in.):	4.00	Air Content:	5.1	Unit Weight (pcf):				
Conc. Temp. (°F):	66	Ambient Temp. (°F):	60	Yardage (c.y.):	9			
Placement Location:	Paving @ E.	bound Arapaho Rd. @	intersectior	of Arapaho & Quaroun Rd.				
	station 21+7	5						
		FIEL	D DATA SE	ET #2				
Ticket #:	3074216	Time Batched:	10:18	Time Sampled:	11:30			
Slump (in.):	3.50	Air Content:	4.6	Unit Weight (pcf):				
Conc. Temp. (°F):	70	Ambient Temp. (*F):	64	Yardage (c.y.):	54			
Placement Location:	Paving @ Q	uaroun Rd. S. bound @	station 2+5	5				
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
	ARI113001	12/7/98	7	6840	6.05	6.15	570				
1	ARI113002	12/7/98	7	7080	6.00	6.25	590				
	ARI113003	12/28/98	28								
	ARI113004	12/28/98	28								
					-						
2	AR1113005	12/7/98	7	7980	5.90	6.15	665				
	ARI113006	12/7/98	7	8880	6.00	6.25	740				
	ARI113007	12/28/98	28								
	ARI113008	12/28/98	28								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE. (2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 12/07/98 DC98-050-84			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS		••	PROJ	ECT DATA		
Strength (psi):	650			Placement Date:	11/06/98		
Slump (in.):	4			Sampled By:	E.E.		
Air Content (%):	4-6			Weather:	Cloudy & cool		
Concrete Temp (°F):				Supplier/Mix:	Ed Bell		
		FIELD	DATA S	ET #1			
Ticket #:	13263	Time Batched:	11:10	Time Sampled:	11:50		
Slump (in.):	4.25	Air Content:	4.3	Unit Weight (pcf):			
Conc. Temp. (°F):	62	Ambient Temp. (°F):		Yardage (c.y.):	10		
Placement Location:	East bound	left turn lane station 6+00)				
Remarks:							
		FIELC	D DATA S	ET #2			
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):			
Placement Location:		-			······································		
Remarks:							

	CONCRETE COMPRESSION TEST RESULTS								
				LDED AND CUR					
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes	
	ARI110601	11/13/98	7	7500	5.95	6.10	625		
1	ARI110602	11/13/98	7	6960	5.95	6.25 ⁷	, 580		
	ARI110603	12/04/98	28	7200	6.00	6.00	600 *	* Does not meet specification	
	ARI110604	12/04/98	28	7980	6.00	6.00	665		
						2			
						-			
								<u>[</u>	

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

TERRA-MAR, INC

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 12/3/98 DC98-050-88			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS			PROJ	ECT DATA		
Strength (psi):	650 Flex			Placement Date:	11/25/98		
Slump (in.):	4			Sampled By:	E.E.		
Air Content (%):	4-6			Weather:	Clear & warm		
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell/Lattimore		
		FIELI	DATA S	ET #1			
Ticket #:	62653	Time Batched:	1:34	Time Sampled:	2:18		
Slump (in.):	3.25	Air Content:	4.9	Unit Weight (pcf):			
Conc. Temp. (°F):	77	Ambient Temp. (°F):		Yardage (c.y.):	20		
Placement Location:	Quirum, Sou	th bound lane					
Remarks:							
		FIELD	DATA S	ET #2			
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):			
Placement Location:		··········					
Remarks:							

Set #	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78 Set # Beam # Test Date Age Max. Load Average Average Modulus of Notes (Days) (lbs) Depth, D Width, B Rupture (psi) Image Image									
1	ARI112501 ARI112502 ARI112503 ARI112504	12/2/98 12/2/98 12/23/98 12/23/98	7 7 28 28	6540 6180	6.10 6.05	6.15 6.10,	545 515	No aggregate fracture		

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Serry L. For Po TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 11/19/98 DC98-050-81			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIF	CATIONS			PROJ	ECT DATA		
Strength (psi):	650			Placement Date:	10/16/98		
Slump (in.):	3-5			Sampled By:	M. Kashem		
Air Content (%):	5-8			Weather:	Clear		
Concrete Temp (°F)	× · · · · · · · · · · · · · · · · · · ·			Supplier/Mix:	Ed Beil		
		FIELI	D DATA S	ET #1			
Ticket #:	13124	Time Batched:	7:30	Time Sampled:	9:15		
Slump (in.):	5.00	Air Content:	4.5	Unit Weight (pcf):	na		
Conc. Temp. (°F):	82	Ambient Temp. (°F):	73	Yardage (c.y.):	9		
Placement Location:	Paving at we	estbound Arapaho Rd @	right turn	lane from Arapaho to tollway service	ce road		
Remarks:							
		FIĘĽ	DATA S	ET #2			
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):			
Placement Location: Remarks:	****						

	CONCRETE COMPRESSION TEST RESULTS									
			BEAMS MC	LDED AND CUR	ED PER ASTM (31, TESTED PE	R ASTM C78			
Set #	Set # Beam # Test Date Age Max. Load Average Average Modulus of Notes									
		I	(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)			
		10/00/00	~	7000	r	A AA				
	ARI101601	10/23/98	7	7200	5.85	6.20	600			
1	ARI101602	11/13/98	28	8220	6.00	6.05	685			
	ARI101603	11/13/98	28	7980	6.05	6.05	665			
	ARI101604	DISCARD								
2										

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny J. F. TERRA-MAR

TERRA-MAR, INC. GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:11/17/98TMI REPORT NO.:DC98-050-86

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

Technician:

TEST DATA

11/17/98 M. Kashem

SPECIFICATIONS
Percent Compaction: 95+
Moisture Content (%): 0pt+

MATERIAL REFERENCE CURVE DATA								
CURVE	TEST				OPTIMUM	MAX. DRY		
NO.	METHOD	MATERIAL DESCRIPTION	N		MOISTURE (%)	DENSITY (pcf)		
8	ASTM D696	Lime Treated Brown	Clay with	Gravel	36.6	80.6		
		IN-PLACE TEST I	RESULT	S				
	·····	DENSITY AND MOISTURE TESTS ARE PER AS	1		r			
TEST	ELEVATION		REF.	%	DRY	%		
NO.	ORLIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY		
1	Grade	Quorum Road, southbound, sta 3+00	8	36.7	85.9	106.6		
2	Grade	Quorum Road, southbound, sta 5+25	8	38.7	83.6	103.7		
2	Grade		v	00.7	00.0	100.7		
			-					
GAUGE I.D.:	10746	STD. DENSITY COUNT	2591	etn i		502		

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Jussy J. For. p-HERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Arapaho Road ImprovementsEc11/17/98HiDC98-050-84To			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIF	ICATIONS				PROJE	CT DATA	
Strength (psi);	650 Flex			Placement	Date:	11/6/98	
Slump (in.):	4			Sampled B	у:	E.E.	
Air Content (%):	4-6			Weather:		Cloudy & cool	
Concrete Temp (°F)	·			Supplier/M	ix:	Ed Bell	
		FIELI	D DATA SE	T #1			
Ticket #:	13263	Time Batched:	11:10	Time Sam	pied:	11:50	
Slump (in.):	4.25	Air Content:	4.3	Unit Weight	(pcf);		
Conc. Temp. (°F):		Ambient Temp. (°F);		Yardage	(c.y.):	10	
Placement Location Remarks:	East bound le	ft turn lane station 6+00	<u>)</u>				
		FIELI	D DATA SE	T #2			
Ticket #:		Time Batched:			noled:		
Slump (in.):		Air Content:		Unit Weight	(pcf):		
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage ((c.v.):		
Placement Location:							
Remarks:							
-		CONCRETE COM	PRESSION	TEST RESULTS			
	BE	EAMS MOLDED AND CURED	PER ASTM	C31, TESTED PER ASTM C78			
Set # Beam #	Test Date	Age Max Load	Average	Average Modulus	of Not	es	

Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)	••••
	ARI110601	11/13/98	7	7500	5.95	6,10	625	
1	ARI110602	11/13/98	7	6960	5.95	6.25	580	
	ARI110603	12/4/98	28					
	ARI110604	12/4/98	28					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jury T. For TERRA-MAR,

TERRA-MAR, INC.
GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 11/17/98 DC98-050-8	ad Improvements	Ed Hu To	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde		
		FIEL	D DATA SET #	3		
Ticket #:	1163114	Time Batched:	10:45	Time Sampled:	11:25	
Slump (in.):	5.00	Air Content:	5.7	Unit Weight (pcf):	na	
Conc. Temp. (°F):	73	Ambient Temp. (°F):	67	Yardage (c.y.):	100	
Placement Location	: Off Quorum	driveway				
Remarks:						
		FIELI	D DATA SET #	4		
Ticket #:		Time Batched:		Time Sampled:		
Slump (in.):		Air Content:		Unit Weight (pcf):		
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):		
Placement Location	:					

CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78 Set # Max. Load Beam # Test Date Age Average Average Modulus of Notes (Days) (lbs) Depth, D Width, B Rupture (psi) 10/26/98 7 6240 6.00 520 ARI101909 6.10 7 3 ARI101910 10/26/98 6240 5.90 6.10 520 ARI101911 11/16/98 28 7620 5.85 6.20 635 Does not meet specification ARI101912 11/16/98 28 7800 5.90 6.20 650 4

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

Remarks:

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. For. TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 11/17/98 DC98-050-82	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Rober Town of Addison - James Pierce, I Town of Addison - Dave Wilde	
SPECI	FICATIONS	PROJE	CT DATA
Strength (psi):	650	Placement Date:	10/19/98
Slump (in.):	3-5	Sampled By:	J. Perez
Air Content (%):	5-8	Weather:	Cloudy

Concrete Temp (°F):				Supplier/Mix:	Lattimore
		FIEL	D DATA SET #1		
Ticket #:	7060213	Time Batched:	8:09	Time Sampled:	9:20
Slump (in.):	na	Air Content:	5.7	Unit Weight (pcf):	na
Conc. Temp. (°F):	70	Ambient Temp. (°F):	68	Yardage (c.y.):	100
Placement Location	: East side of	Arapaho Rd			
Remarks:					
		FIEL	D DATA SET #2		
Ticket #:	7060234	Time Batched:	11:00	Time Sampled:	12:45
Slump (in.):	na	Air Content:	5.7	Unit Weight (pcf):	na
Conc. Temp. (°F):	70	Ambient Temp. (°F):	68	Yardage (c.y.):	100
Placement Location	: West side o	f Arapaho Rd			

Remarks:

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
1											
	ARI101901	10/26/98	7	9540	6.00	6.20	795				
1	ARI101902	10/26/98	7	8640	6.00	6.20	720				
	ARI101903	11/16/98	28	9840	6.00	6.05	820				
	ARI101904	11/16/98	28	8640	6.05	6.10	720				
[
	ARI101905	10/26/98	7	9840	6.00	6.00	820				
2	ARI101906	10/26/98	7	8400	5.85	6.20	700				
	ARI101907	11/16/98	28	10620	5.90	6.35	885				
	ARI101908	11/16/98	28	10860	6.00	6.35	905				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Gerry TERRA-MAR. INC.

TERRA-MAR, INC. GEOTECHNICAL, ENVIRONMENTAL, AND CONSTRUCTION MATERIALS TESTING Dallas Fort Worth Houston Lubbock Longview Austin 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

DAILY ACTIVITY OBSERVATION REPORT

Ed Bell Construction CLIENT: **PROJECT:** Arapaho Road Improvements PROJECT NO.: DC98-050-85 **REPORT DATE: 11/16/98**

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

On 11/13/98, TMI representative Mohammed Kashem was present at the above referenced project to perform in-place density and field gradations. Upon arrival, TMI was notified by the contractor that the tests were cancelled for the day due to inclement weather conditions.

T. Forence

Terra-Mar, Inc.

GEOTECHNICAL, ENVIRONMENTAL, AND CONSTRUCTION MATERIALS TESTING Dallas Fort Worth Houston Lubbock Longview Austin 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

DAILY ACTIVITY OBSERVATION REPORT

CLIENT: Ed Bell Construction PROJECT: Arapaho Road Improvements PROJECT NO.: DC98-050-85 REPORT DATE: 11/16/98

DISTRIBUTION:

Ed Bell Construction – Doug Teter Huitt Zollars, Inc. – Kenneth Roberts, P.E. Town of Addison – James Pierce, P.E. Town of Addison – Dave Wilde

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On 11/13/98, TMI representative Mohammed Kashem was present at the above referenced project to perform in-place density and field gradations. Upon arrival, TMI was notified by the contractor that the tests were cancelled for the day due to inclement weather conditions.

- For pe

Terra-Mør, Inc.

		TERRA-M	•		
	TECHNICAL ENVIRO				
	FORT WORTH				
11050 Abi	es Lane, Dallas, Tex	as 75229	Phone:972-488	-8800 Fax: (972	2)488-8080
	STABILIZE	D SOIL G	RADATION REPO	ORT	
CLIENT:	Ed Bell Construction			DISTRIBUTION:	
PROJECT:	Arapaho Road Improve	ements		Ed Beil Construct	ion - Doug Teter
REPORT DATE	: 11/16/98			Huitt-Zollars, Inc.	- Kenneth Roberts, P.E
TMI REPORT #	: DC98-050-87			Town of Addison	- James Pierce, P.E.
				Town of Addison	- Dave Wilde
Test Method:	·······		Technician:	M. Kashem	
Minimum % Pa	ssing 1 3/4" Sieve:	100	Date Tested:	11/16/98	
Minimum % Pa	ssing No. 4 Sieve:	60	Stabilizing Agent	Lime	
				PERCENT	PERCENT
				PASSING	PASSING
TEST NUMBER		LOCATER		13/4° SHEVE	#4 SIEVE
1	Quorum Road southbo	und at statio	n 5+25	100	66.7
- 2	Quorum Road southbo	und at statio	n 5+25	100	71.6
	·····				
	·				
·····					
	·				
	L				

Remarks:

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

TERRA-MAR, INC.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	10/25/98	Huitt-Zollars, Inc Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-80	Town of Addison - James Pierce, P.E.
		Town of Addison - Dave Wilde

SPECIF	ICATIONS			PRO.	JECT DATA
Strength (psi):	650			Placement Date:	10/14/98
Slump (in.):	3-5			Sampled By:	J. Perez & B. Eberts
Air Content (%):	5-8			Weather:	Sunny & warm
Concrete Temp (°F)	*			Supplier/Mix:	TXI
		FIEL	D DATA SET #1	······································	
Ticket #:	1159413	Time Batched:	11:11	Time Sampled:	12:40
Slump (in.):	5.50	Air Content:	4.1	Unit Weight (pcf):	
Conc. Temp. (°F):	88	Ambient Temp. (°F):	88	Yardage (c.y.):	20
Placement Location	: Driveway ex	xit off Arapaho Road			
Remarks:	·····				
		FIEL	D DATA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		· Ambient Temp. (°F):		Yardage (c.y.):	
Placement Location	•	• 			
Remarks:					

				NCRETE CO				
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
	ARI101401	10/21/98	7	6540	5.65	6.20	545	
1	ARI101402	10/21/98	7	6480	5.90	6.25	540	
	ARI101403	11/11/98	28	7800	6.00	6.00	650	
	ARI101404	11/11/98	28	8100	6.00	6,00	675	
2								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jun en pe TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	10/30/98	Huitt-Zollars, Inc Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-82	Town of Addison - James Pierce, P.E.
		Town of Addison - Dave Wilde

SPECIF	ICATIONS			PROJEC	CT DATA
Strength (psi):	650			Placement Date:	10/19/98
Slump (in.):	3-5			Sampled By:	J. Perez
Air Content (%):	5-8			Weather:	Cloudy
Concrete Temp (°F)	:			Supplier/Mix:	Lattimore
		FIEL	D DATA SET #1		
Ticket #:	7060213	Time Batched:	8:09	Time Sampled:	9:20
Slump (in.):	na	. Air Content:	5.7	Unit Weight (pcf):	na
Conc. Temp. (°F):	70	Ambient Temp. (°F):	68	Yardage (c.y.):	100
Placement Location	: East side of	Arapaho Rd			
Remarks:					
		FIEL	D DATA SET #2		
Ticket #:	7060234	Time Batched:	11:00	Time Sampled:	12:45
Slump (in.):	na	Air Content:	5.7	Unit Weight (pcf):	na
Conc. Temp. (°F):	70	Ambient Temp. (°F):	68	Yardage (c.y.):	100
Placement Location	: West side o	f Arapaho Rd			
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
	ARI101901	10/26/98	7	9540	6.00	6.00	795				
1	ARI101902	10/26/98	7	8640	6.00	6.00	720				
	ARI101903	11/16/98	28								
	ARI101904	11/16/98	28								
	ARI101905	10/26/98	7	9840	6.00	6.00	820				
2	ARI101906	10/26/98	7	8400	6.00	6.00	700				
	ARI101907	11/16/98	28								
	ARI101908	11/16/98	28								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. Fro TERRA-MAR, INC. کک 🕅

		TERRA	-MAR, INC.				
	GEOTECHNICAL	ENVIRONMEN	TAL AND N	IATERIALS ENGINE	ERS		
	DALLAS FORT	WORTH HOUST	<u>'ON LONGV</u>	IEW LUBBOCK AUS	TIN		
	11050 Abl	əs Lane, Dallas, Tex	as 75229 F	hone:972-488-8800			
C	CONCRETE INSP	ECTION AND FL (THIRD PO		TRENGTH TEST RI	EPORT		
CLIENT:	Ed Bell Construction	•		•			
PROJECT:	Arapaho Road Impro			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter			
REPORT DATE:	10/30/98	- Childhid		Zollars, Inc Kenneth R			
TMI REPORT #:							
				of Addison - Dave Wild			
SPECI	ICATIONS	FIELD D	ATA SET #3	PR	OJECT DATA		
Ticket #:	1163114	Time Batched: <u>1</u>	0:45	Time Sampled	11:25		
Slump (in.):	5.00	Air Content:	5.7	Unit Weight (pcf)	na na		
Conc. Temp. (°F):		· · · /	67	Yardage (c.y.)	100		
Placement Location Remarks:	n: Off Quorum drivewa	<u>y</u>					
		FIELD D	ATA SET #4	· ·			
Ticket #:		Time Batched:		Time Sampled			
Slump (in.):		Air Content:					
Conc. Temp. (°F):		nt Temp. (°F):		Yardage (c.y.)	:		
Placement Location	1:						

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes		
3	ARI101909 ARI101910	10/26/98 10/26/98	7 7	6240 6240	6.00 6.00	6.00 6.00	520 520			
5	ARI101910 ARI101911 ARI101912	11/16/98 11/16/98	28 28	0240	0.00	0.00	520			
4										

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

Remarks:

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/25/98 DC98-050-7	ad Improvements	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIF	ICATIONS				PROJE	CT DATA
Strength (psi):	650				Placement Date:	9/21/98
Slump (in.):	3+/-1				Sampled By:	John Sullivan
Air Content (%):	5 - 8		Weather:			Clear
Concrete Temp (°F)	na	*****			Supplier/Mix:	Ed Bell
		FIEL	DATA S	ET #1		
Ticket #:	14212	Time Batched:	na		Time Sampled:	10:30
Slump (in.):	2.50	Air Content:	5.1		Unit Weight (pcf):	na
Conc. Temp. (°F):	85	Ambient Temp. (°F);	na	_	Yardage (c.y.):	па

		FIELD	DATA SET #	¥2	
Ticket #:	7058711	Time Batched:	na	Time Sampled:	1:45
Slump (in.):	2.00	Air Content:	5.0	Unit Weight (pcf):	па
Conc. Temp. (°F):	87	Ambient Temp. (°F):	98	Yardage (c.y.):	na
Placement Location	Station 30+	07.33, left tum lane, south	n side		
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78												
Set #													
	AR1092101 AR1092102 AR1092103	9/28/98 9/28/98 10/19/98	7 7 28	5760 6720 7860	6.00 6.00 5.90	6.00 6.00 6.30	480 560 655						
	ARI092104	10/19/98	28	9300	6.00	6,15	775						
2	ARI092105 ARI092106	9/28/98 9/28/98	7 7	7800 8160	6.00 6.00	6.00 6.00	650 680						
	ARI092107 ARI092108	10/19/98 10/19/98	28 28	9540 9300	6.00 6.00	6.10 6.00	795 775						

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Placement Location: Station 45+50, north side of paving at Arapaho

Remarks:

JERRA-MAR, INC.

DALLAS	FORT	WORTH	HOUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Cor Arapaho Ro 10/23/98 DC98-050-7	ad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde					
SPECIF	ICATIONS			-	PROJ	ECT DATA			
Strength (psi):	650				Placement Date:	9/24/98			
Slump (in.):	3+/-1				Sampled By:	John Sullivan			
Air Content (%):	5 - 8				Weather:	Clear & warm			
Concrete Temp (°F)	•	······································			Supplier/Mix:	Lattimore			
		FIELD	DATA SE	T #1					
Ticket #:	6080933	Time Batched:			Time Sampled:	11:00			
Slump (in.):	2.50	Air Content:	5.1	່ ເ	Init Weight (pcf):				
Conc. Temp. (°F):	82	Ambient Temp. (°F):	87	•	Yardage (c.y.):				
Placement Location:	Station 6+0	0 Southpaving Arapaho Ro	1.	•					
Remarks:									
		FIELD	DATA SE	T #2					
Ticket #:	13064	Time Batched:			Time Sampled:	3:45			
Slump (in.):	3.00	Air Content:	5.1	L L	Init Weight (pcf):				
Conc. Temp. (°F):	85	Ambient Temp. (°F):			Yardage (c.y.):				
Placement Location:	Westside of	Southwestern Bell next to	building, /	Arapaho exit.		••••••••••••••••••••••••••••••••••••••			
Remarks:		•••••••••••••••••••••••••••••••••••••••							

			co		MPRESSION	TEST RESU	ILTS					
			BEAMS MC	LDED AND CUR	ED PER ASTM (31, TESTED PE	R ASTM C78					
Set #												
ļļ			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
	ARI092401	10/1/98	7	8340	6.00	6.00	695					
1	ARI092402	10/1/98	7	7920	5.95	6.10	660					
	AR1092403	10/22/98	28	8580	5.95	6.10	715					
	ARI092404	10/22/98	28	8820	6.00	6.00	735					
2	ARI092405	10/1/98	7	7440	6.00	6.05	620					
	ARI092406	10/1/98	7	7680	6.00	6.10	640					
	ARI092407	10/22/98	28	9420	6.00	6.15	785					
	AR1092408	10/22/98	28	8940	5.85	6.10	745					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE. (2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. Form. P.S. TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/25/98 DC98-050-8	ad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde							
SPECIF	ICATIONS			PRO	JECT DATA						
Strength (psi):	650			Placement Date:	10/14/98						
Slump (in.):	3-5			Sampled By:	J. Perez & B. Eb						
Air Content (%):	5-8			Weather:	Sunny & warm						
Concrete Temp (°F)				Supplier/Mix: TXI							
		FIEL	DATA S	ET #1							
Ticket #:	1159413	Time Batched:	11:11	Time Sampled:	12:40						
Slump (in.):	5,50	Air Content:	4.1	Unit Weight (pcf):							
Conc. Temp. (°F):	88	Ambient Temp. (°F):	88	Yardage (c.y.):	20						
Placement Location:	Driveway ex	it off Arapaho Road									
Remarks:		ł									
		FIEL	DATA S	ET #2							
Ticket #:		Time Batched:		Time Sampled:							
Slump (in.):		Air Content:		Unit Weight (pcf):							
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):							

Conc. Temp. (°F): ____ Placement Location: ____ Remarks:

	CONCRETE COMPRESSION TEST RESULTS												
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78												
Set #													
	(Days) (lbs) Depth, D Width, B Rupture (psi)												
	ARI101401	10/21/98	7	6540	5.65	6.20	545						
1	ARI101402	10/21/98	7	6480	5.90	6.25	540						
	ARI101403	11/11/98	28										
	ARI101404	11/11/98	28										
2													

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Jenny L. Fox, re TERRA-MAR, INC.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/25/98 DC98-050-7	ad improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde					
SPECIF	ICATIONS			PROJ	ECT DATA				
Strength (psi):	650			Placement Date:	9/23/98				
Slump (in.):	3+/-1			Sampled By:	John Sullivan				
Air Content (%):	5 - 8			Weather:	Clear				
Concrete Temp (°F)	*			Supplier/Mix:	Lattimore				
		FIEL	DATA SE	T #1					
Ticket #:	6080783	Time Batched:		Time Sampled:	8:45				
Slump (in.):	3.00	Air Content:	5.5	Unit Weight (pcf):					
Conc. Temp. (°F):	80	Ambient Temp. (°F):	80	Yardage (c.y.):					
Placement Location:	South end o	f Arapaho, west of Tollwa	ay, station 6						
Remarks:									
		FIELD	DATA SE	T #2					
Ticket #:	13024	Time Batched:		Time Sampled:	12:00				
Slump (in.):	2.50	Air Content:	5.4	Unit Weight (pcf):					
Conc. Temp. (°F):	84	Ambient Temp. (°F):	88	18 Yardage (c.y.):					
Placement Location: Remarks:	South end o	f Arapaho, west of Tollwa	ay, station 6	4+50					

	CONCRETE COMPRESSION TEST RESULTS												
BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78													
Set #													
	(Days) (Ibs) Depth, D Width, B Rupture (psi)												
	ARI092301	9/30/98	7	9480	6.00	6,00	790						
1	ARI092302	9/30/98	7	8760	6.00	6.00	730						
	ARI092303	10/21/98	28	10500	6.00	6.25	875						
	ARI092304	10/21/98	28	10200	5.95	6.25	850						
	AR/092305	9/30/98	7	8820	6.00	6.00	735						
2	AR1092306	9/30/98	7	7500	6.00	6.00	625						
	ARI092307	10/21/98	28	10680	5.95	6.15	890						
	AR1092308	10/21/98	28	9540	5.90	6. <u>10</u>	795						

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

ERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Co Arapaho R 10/25/98 DC98-050-	oad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts Town of Addison - James Pierce, P. Town of Addison - Dave Wilde	·				
		FIELC) DATA SE	ET #3					
Ticket #:	na	_ Time Batched:	na	Time Sampled:	4:40				
Slump (in.):	2.50	Air Content:	<u>5</u> .0	Unit Weight (pcf):	na				
Conc. Temp. (°F):	na	Ambient Temp. (°F):	90	Yardage (c.y.): <u>na</u>					
Placement Location Remarks:	: South end	of Arapaho, station 6+00							
		FIELD	DATA SE	T #4					
Ticket #:		Time Batched:		Time Sampled:					
Slump (in.):		Air Content:		Unit Weight (pcf):					
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):					
Placement Location									
Remarks:					······································				

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78												
Set #													
3	ARI092309 ARI092310	9/30/98 9/30/98	7 7 28	8580 7440	6.00 6.00	6.00 6.00 6.10	715 620 775						
	ARI092311 ARI092312	10/21/98 10/21/98	28 28	9300 9360	6.00 <u>6.10</u>	6.15	780						

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

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				_									

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

REPO	JECT: ORT DATE: REPORT #:	Ed Bell Cor Arapaho Ro 10/27/98 DC98-050-7	ad Improv	vements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde					
	SPECIFI	CATIONS				PROJECT DATA					
Stren	gth (psi):	650		_			Placement Dat	e:0	9/25/98		
Slum	p (in.):	3+/-1		_			Sampled By:	Joh	n Sullivan		
Air C	ontent (%):	5 - 8					Weather:		Clear		
Conc	rete Temp (°F)	na		_			Supplier/Mix:	La	attimore		
				FIE	LD DATA SI	ET #1					
Ticke	t #:	13073	T	ime Batched:	na		Time Sample	d:	11:00		
Slum	p (in.):	2.50	•	Air Content:	5.0	_	Unit Weight (pcf):	na		
Conc	. Temp. (°F):	81	Ambien	t Temp. (°F):	90		Yardage (c.y.):	na		
	ment Location:	Arapaho Ro	ad exit ne	ext to SWB bu	ilding	_					
Rema	arks:										
				FIE	LD DATA SI	ET #2					
Ticke	t #:		Ti	ime Batched:		_	Time Sample				
Slum	p (in.):			Air Content:			Unit Weight (pcf):			
Conc	. Temp. (°F):		Ambien	t Temp. (°F):			Yardage (c.y.):			
Place	ment Location:										
Rema	arks:										
							_				
						N TEST RESU	-				
	- "					C31, TESTED PE					
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				

Set #	Beam #		Age	Max. Load	Average	Average	woaulus of	Notes
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)	
	ARI092501	10/02/98	7	7440	6.00	6.00	620	
1	ARI092502	10/02/98	7	7560	6.00	6.00	630	
	AR1092503	10/23/98	28	9600	6.00	6.00	800	
	AR1092504	10/23/98	28	9060	6.00	6.00	755	
2								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

	GEOTECH DALLAS	INICAL ENVIRONMI FORT WORTH HOU			LS ENGINEE	
	11	050 Ables Lane, Dallas,	Texas 75229	Phone:972-	-488-8800	
C	ONCRETE	INSPECTION AND	FLEXURA POINT LOA		TH TEST REP	PORT
CLIENT:Ed Bell ConstructionREPORT DISTRIBUTION:PROJECT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterREPORT DATE:10/25/98Huitt-Zollars, Inc Kenneth Roberts, P.E.TMI REPORT #:DC98-050-81Town of Addison - James Pierce, P.E.Town of Addison - Dave WildeTown of Addison - Dave Wilde						
SPECIFI Strength (psi):	CATIONS 650			Р	PROJ lacement Date:	ECT DATA 10/16/98
Slump (in.):	3-5				ampled By:	M. Kashem
Air Content (%):	5-8			N N	/eather:	Clear
Concrete Temp (°F):				S	upplier/Mix:	Ed Bell
		FIELI	D DATA SET	#1		
Ticket #:	13124	Time Batched:	7:30	1	Fime Sampled:	9:15
Slump (in.):	5.00	Air Content:	4.5		it Weight (pcf):	па
Conc. Temp. (°F):	82	Ambient Temp. (°F):	73		Yardage (c.y.):	9
Placement Location: Remarks:	Paving at we	estbound Arapaho Rd @	right turn land	e from Arapaho	o to tollway servi	ce road
		FIELI	DATA SET	#2		
Ticket #:		Time Batched:			Fime Sampled: _	
Slump (in.):		Air Content:				
Conc. Temp. (°F): Placement Location: Remarks:		Ambient Temp. (°F):			Yardage (c.y.):	

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
1	ARI101601 ARI101602 ARI101603 ARI101604	10/23/98 11/13/98 11/13/98	7 28 28 hold	7200	6.00	6.00	600				
2											

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

*Revised Copy - Report No

CLIENT: Ed Bell Construction

DISTRIBUTION:

PROJECT: Arapaho Road Improvements **REPORT DATE:** 09/10/98 TMI REPORT NO .: DC98-050-66*

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

Technician:

TEST DATA

09/03/98

M. Kashem

SPECIFICATIONS 95+ Percent Compaction: Moisture Content (%): opt+ MATERIAL REFERENCE CURVE DATA

CURVE	TEST			OPTIMUM	MAX. DRY								
NO.	METHOD	MATERIAL DESCRIPTIO	N		MOISTURE (%)	DENSITY (pcf)							
5	D698	Lime Treated Brown C	lay with	Gravel	25.7	93.6							
	IN-PLACE TEST RESULTS												
	DENSITY AND MOISTURE TESTS ARE PER ASTM D2922, D3017, RESPECTIVELY												
TEST	ELEVATION		REF.	%	DRY	%							
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY							
1	Grade	East bound Arapaho Rd. station 60+75	5	27.7	92.6	98.9							
2	Grade	East bound Arapaho Rd. station 62+25	5	29.0	91.1	97.3							
3	Grade	East bound Arapaho Rd. station 64+00	5	27.8	90.0	96.2							
4	Grade	East bound Arapaho Rd. station 65+50	5	26.5	90.9	97.1							
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2356	STD. I	MOISTURE COUNT:	608							

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Jury L. Ferra per

		RRA-WAR, INC.					
		MENTAL AND MATERIALS ENGINEER					
		<u>DUSTON LONGVIEW LUBBOCK AUSTIN</u>					
	11050 Ables Lane, Dalla:	s, Texas 75229 Phone:972-488-8800					
	CONCRETE INSPECTION AN	D FLEXURAL STRENGTH TEST REPO	DRT				
	(THIRD	POINT LOADING)					
CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:					
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter					
REPORT DATE:	10/21/98	Huitt-Zollars, Inc Kenneth Robe	rts, P.E.				
TMI REPORT #:	DC98-050-79	Town of Addison - James Pierce,	P.E.				
		Town of Addison - Dave Wilde					
SPECI	FICATIONS	PROJE	CT DATA				
Strength (psi):	650	Placement Date:	10/13/98				
Slump (in.):	3+/-1	Sampled By:	Brent Gilbert				
Air Content (%):	5 - 8	Weather:	Sunny				
Concrete Temp (°F	F)na	Supplier/Mix:	Ed Bell				
	FIE	LD DATA SET #1					
Ticket #:	na Time Batched:	na Time Sampled:	10:50				
Slump (in.):	3.00 Air Content:	5.0 Unit Weight (pcf):	па				
Conc. Temp. (°F):	89 Ambient Temp. (°F):	78 Yardage (c.y.):	60				
	n: Centerline paving at Arapaho, 100	yds east of Quorum					
Remarks:							
T tol		LD DATA SET #2					
Ticket #:	Time Batched: Air Content:	Time Sampled: Unit Weight (pcf):					
Slump (in.):	Ambient Temp. (85)						
		Yardage (c.y.):					
Placement Location Remarks:		MPRESSION TEST RESULTS ED PER ASTM C31, TESTED PER ASTM C78					

	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
	ARI101301	10/20/98	7	9240	6.00	6.00	770				
1	ARI101302	10/20/98	7	8400	6.00	6.00	700				
	ARI101303	11/10/98	28								
	ARI101304	11/10/98	28								
2											

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Jenny J. France JERRA-MAR, INC.

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ステスキアメントを含むする 人名シイン シード・ディー・チャート

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

		Town of Addison - Dave Wilde
TMI REPORT #:	DC98-050-75	Town of Addison - James Pierce, P.E.
REPORT DATE:	10/21/98	Huitt-Zollars, Inc Kenneth Roberts, P.E.
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:

SPECIFI	CATIONS			PROJE	
Strength (psi):	650			Placement Date:	09/22/98
Slump (in.):	3+/-1			Sampled By:	John Sullivan
Air Content (%):	5 - 8			Weather:	Clear
Concrete Temp (°F)	na			Supplier/Mix:	Lattimore
		FIEL	D DATA SET #1		
Ticket #:	705877	Time Batched:	09:00	Time Sampled:	10:00
Slump (in.):	3.50	Air Content:	5.0	Unit Weight (pcf):	na
Conc. Temp. (°F):	81	Ambient Temp. (°F):	90	Yardage (c.y.):	na
Placement Location:	Main pavin	g east side of Quorum Ro	1, station 3+50		
Remarks:				_	
		FIEL	D DATA SET #2		
Ticket #:	7058818	Time Batched:	na	Time Sampled:	4:20
Slump (in.):		Air Content:	5.0	Unit Weight (pcf):	na
Conc. Temp. (°F):	88	Ambient Temp. (°F):	99	Yardage (c.y.):	na
Placement Location:	Main paving	g east side of Quorum Ro	j		
Remarks:					

			со	NCRETE CO	MPRESSION	TEST RESU	ILTS					
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes				
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
			_									
	ARI092201	09/29/98	7	7440	6.00	6.00	620					
1	ARI092202	09/29/98	7	8040	6.00	6.00	670					
	AR1092203	10/20/98	28	10380	6.00	6.00	865					
	AR1092204	10/20/98	28	10620	6.00	6.00	885					
	ARI092205	09/29/98	7	7980	6.00	6.00	665					
2	AR1092206	09/29/98	7	7800	6.00	6.00	650					
	ARI092207	10/20/98	28	9420	6.00	6.00	785					
	ARI092208	10/20/98	28	9000	6.00	6.00	750					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231



DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/1 <i>5/</i> 98 DC98-050-7	ad Improvements						
SPECIFI	CATIONS			PROJ	ECT DATA			
Strength (psi):	ength (psi): 650			Placement Date:	09/08/98			
Slump (in.):	3 - 5			Sampled By:	John Sullivan			
Air Content (%):				Weather:	Clear			
Concrete Temp (°F)				Supplier/Mix:	Ed Bell/Lattimore			
	_	FIELI	D DATA S	SET #1				
Ticket #:	14360	Time Batched:	na	Time Sampled:	12:45			
Slump (in.):	3.00	Air Content:	ла	Unit Weight (pcf):	na			
Conc. Temp. ("F):	91	Ambient Temp. (°F):	104	Yardage (c.y.):	na			
Placement Location:	Paving at A	rapaho Road						
Remarks:								
		FIELI	D DATA S	SET #2				
Ticket #:	60797 <u>5</u> 4	Time Batched:	na	Time Sampled:	1:20			
Slump (in.):	3.00	Air Content:	5.1	Unit Weight (pcf):	па			
Conc. Temp. (°F):	91	Ambient Temp. (°F):	104	Yardage (c.y.):	na			
Placement Location:	Paving at A	rapaho Road						
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS											
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes				
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
	ARI090801	09/15/98	7	6960	6.05	6.20	580					
1	ARI090802	09/15/98	7	6720	6.00	6.05	560					
	ARI090803	10/06/98	28	7980	5.95	6.10	665					
	ARI090804	10/06/98	28	8460	6.05	6.15	705					
	ARI090805	09/15/98	7	6180	6.00	6,15	515					
2	ARI090806	09/15/98	7	6000	6.00	6.10	500					
	AR1090807	10/06/98	28	8640			720					
	ARI090808	10/06/98	28	9000	6.00	6.15	750					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING) **CLIENT: Ed Bell Construction REPORT DISTRIBUTION:** Arapaho Road Improvements Ed Bell Construction - Doug Teter **PROJECT:** Huitt-Zollars, Inc. - Kenneth Roberts, P.E. **REPORT DATE:** 10/15/98 TMI REPORT #: DC98-050-71 Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde **SPECIFICATIONS** PROJECT DATA FIELD DATA SET #3 Ticket #: 6079798 Time Batched: 03:14 Time Sampled: 4:00 Air Content: Slump (in.): 3.00 5,0 Unit Weight (pcf): na Conc. Temp. (°F): 92 Ambient Temp. (°F): 107 Yardage (c.y.): na Placement Location: Paving at Arapaho Road Remarks: FIELD DATA SET #4 Ticket #: **Time Batched:** Time Sampled: Unit Weight (pcf): Slump (in.): Air Content: Conc. Temp. (°F): Ambient Temp. (°F): Yardage (c.y.): **Placement Location:** Remarks:

TERRA-MAR, INC.

	CONCRETE COMPRESSION TEST RESULTS							
			BEAMS MC	LDED AND CUR	ED PER ASTM C	31, TESTED PE	R ASTM C78	
Set #	Beam #	Test Date	Age (Days)	Max, Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
	AR1090809	09/15/98	7	7320	6.00	6.15	610	
3	ARI090810	09/15/98	7	6840	6.10	6.25	570	
	ARI090811	10/06/98	28	10560	6.00	6.20	880	
ļ	ARI090812	10/06/98	28	8580	6.00	6.20	715	
			,					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/09/98 DC98-050-7	ad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS			PRO	ECT DATA		
Strength (psi):	650			Placement Date:	09/09/98		
Slump (in.):	3 - 5			Sampled By:	John Sullivan		
Air Content (%):	5 - 8			Weather:	Clear		
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell/Lattimore		
		FIELC	DATA S	ET #1			
Ticket #:	14379	Time Batched:	na	Time Sampled:	8:30		
Slump (in.):	3.00	Air Content:	5.0	Unit Weight (pcf):	na		
Conc. Temp. (°F):	85	Ambient Temp. (°F):	79	Yardage (c.y.):	na		
Placement Location: Remarks:	Paving at A	rapaho Road south side					
	******	FIELD	DATA S	ET #2			
Ticket #:	607900	Time Batched:	na	Time Sampled:	11:00		
Slump (in.):	3.00	Air Content:	5.1	Unit Weight (pcf):	na		
Conc. Temp. (°F): 87 Ambient Temp, (°F):				Yardage (c.y.):	na		
Placement Location:	Paving at A	rapaho Road south side					
Remarks:			-				

	CONCRETE COMPRESSION TEST RESULTS							
			BEAMS MC	LDED AND CUR	ED PER ASTM C	31, TESTED PE	R ASTM C78	
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)	
	ARI090901	09/16/98	7	8400	6.00	6.00	700	
1	ARI090902	09/16/98	7	6840	6.00	6.00	570	
	AR1090903	10/07/98	28	9000	6.00	6.00	750	
	AR1090904	10/07/98	28	8640	6.00	6.00	720	
	AR1090905	09/16/98	7	6780	6.00	6.00	565	
2	ARI090906	09/16/98	7	7560	6.00	6.00	630	
	ARI090907	10/07/98	28	8580	6.00	6.00	715	
	AR1090908	10/07/98	28	10800	6.00	6.00	900	

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jury Z For re TERRA-MAR, INC.

		TERI	RA-MAR, INC	•							
	GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS										
	DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN										
11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800											
c	ONCRETE	INSPECTION AND	FLEXURAL	STRENGTH TEST REPO	RT						
			POINT LOAD								
CLIENT:	Ed Bell Con	struction	REPORT DISTRIBUTION:								
PROJECT:	Arapaho Ro	ad Improvements	Ed Bell Construction - Doug Teter								
REPORT DATE:	10/09/98		Huitt-Zollars, Inc Kenneth Roberts, P.E.								
TMI REPORT #:	DC98-050-7	2	Town of Addison - James Pierce, P.E.								
			Tow	Town of Addison - Dave Wilde							
SPECIF	ICATIONS	FIELI	D DATA SET #3	TDATA							
Ticket #:	7058176	Time Batched:	na	Time Sampled:	12:45						
Slump (in.):	3.00	Air Content:	5.0	Unit Weight (pcf):	na						
Conc. Temp. (°F):	87	Ambient Temp. (°F):	na	Yardage (c.y.):	na						
Placement Location	: Paving at A	rapaho Road south side									
Remarks:											

9 	FIELD DATA SET	T #4	
Ticket #:	Time Batched:	Time Sampled:	
Slump (in.):	Air Content:	Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient Temp, (°F):	Yardage (c.y.):	
Placement Location:			
Remarks:			

	CONCRETE COMPRESSION TEST RESULTS							
Set #	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78 Set # Test Date Age Max. Load Average Average Modulus of Notes (Days) (Ibs) Depth, D Width, B Rupture (psi)							
3	ARI090909 ARI090910 ARI090911 ARI090912	09/16/98 09/16/98 10/07/98 10/07/98	7 7 28 28	9240 8280 9600 12060	6.00 6.00 6.00 6.00	6.00 6.00 6.00 6.00	770 690 800 1005	
4	AC1030312	10/01/90		12000	0.00	0.00	1005	

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Juny F. Fro. r.

DALLAS	FORT WORTH	HOUSTON	LONGV/EW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Cor Arapaho Ro 09/17/98 DC98-050-1	oad Improvements	×	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS						
Strength (psi):	650			Placement Date:	09/09/98		
Slump (in.):	3 - 5			Sampled By:	John Sullivan		
Air Content (%):	5 - 8			Weather:	Clear		
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell/Lattimore		
		FIEL	D DATA S	ET #1			
Ticket #:	14379	Time Batched:	na	Time Sampled:	8:30		
Slump (in.):	3.00	Air Content:	5.0	Unit Weight (pcf):	na		
Conc. Temp. (°F):	85	Ambient Temp. (°F):	79	Yardage (c.y.):	na		
Placement Location:	Paving at A	rapaho Road south side					
Remarks:							
		FIEL	D DATA S	SET #2			
Ticket #:	607900	Time Batched:	па	Time Sampled:	11:00		
Slump (in.):	3.00	Air Content:	5.1	Unit Weight (pcf):	กล		
Conc. Temp. (°F):	87	Ambient Temp. (°F):	па	Yardage (c.y.):	na		
Placement Location:	Paving at A	rapaho Road south side					
Remarks:							

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78							
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
	ARI090901	09/16/98	7	8400	6.00	6.00	700	
	AR1090902 AR1090903	09/16/98 10/07/98	7 28	6840	6.00	6.00	570	
	AR1090904	10/07/98	28					
2	ARI090905 ARI090906	09/16/98 09/16/98	7 7	6780 7560	6.00 6.00	6.00 6.00	565 630	
	ARI090907 ARI090908	10/07/98 10/07/98	28 28					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jerry L. For 12 JERRA-MAR, INC.

TERRA-MAR, INC.									
GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS									
	DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN								
		050 Ables Lane, Dallas,	Texas 75229	Phone:9	72-488-8800				
C	ONCRETE	INSPECTION AND		STREN	GTH TEST REP	VORT			
Ŭ			POINT LOAI						
CLIENT:	Ed Bell Cons	struction	RE	PORT DI	STRIBUTION:				
PROJECT:	Arapaho Roa	ad Improvements	Ed	Bell Cons	struction - Doug Tete	er			
REPORT DATE:	09/17/98				, Inc Kenneth Rob	-			
TMI REPORT #:	DC98-050-7	2		Town of Addison - James Pierce, P.E.					
			То	wn of Add	ison - Dave Wilde				
SPECIF	ICATIONS	FIELC) DATA SET #						
Ticket #:	7058176	Time Batched:			Time Sampled:				
Slump (in.):	3.00	Air Content:			Unit Weight (pcf): _				
Conc. Temp. (°F):	<u>87</u>		na		Yardage (c.y.): _	na			
Remarks:	Paving at Ar	apaho Road south side							
	·····								
Ticket #:			DATA SET #	4	Time Semaled:				
Slump (in.):		Time Batched: Air Content:		1	Inne Sampleu.				
Conc. Temp. (°F):		Ambient Temp. (°F):							
Placement Location:									
Remarks:		######################################							
		winde de fait de la constant de la c							

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78							
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
3	ARI090909 ARI090910 ARI090911 ARI090912	09/16/98 09/16/98 10/07/98 10/07/98	7 7 28 28	9240 8280	6.00 6.00	6.00 6.00	770 690	
4								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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JERRA-MAR, INC.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	09/29/98	Huitt-Zollars, Inc Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-75	Town of Addison - James Pierce, P.E.
		Town of Addison - Dave Wilde

SPECIFI	CATIONS			PROJE	CT DATA
Strength (psi):	650			Placement Date:	09/22/98
Slump (in.):	3+/-1			Sampled By:	John Sullivan
Air Content (%):	5 - 8			Weather:	Clear
Concrete Temp (°F)	na			Supplier/Mix:	Lattimore
		FIEL	D DATA SET #	l	
Ticket #:	705877	Time Batched:	09:00	Time Sampled:	10:00
Slump (in.):	3.50	. Air Content:	5.0	Unit Weight (pcf):	na
Conc. Temp. (°F):	81	Ambient Temp. (°F):	90	Yardage (c.y.):	na
Placement Location:	Main paving	east side of Quorum Ro	I, station 3+50		
Remarks:					
		FIEL	D DATA SET #2	2	
Ticket #:	7058818	Time Batched:	na	Time Sampled:	4:20
Slump (in.):		Air Content:	5.0	Unit Weight (pcf):	na
Conc. Temp. (°F):	88	Ambient Temp. (°F):	99	Yardage (c.y.):	na
Placement Location:	Main paving	east side of Quorum Ro	1		
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS								
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78								
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes	
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)		
	AR1092201	09/29/98	7	7440	6.00	6.00	620		
1	ARI092202	09/29/98	7	8040	6.00	6.00	670		
	ARI092203	10/20/98	28						
	ARI092204	10/20/98	28						
	ARI092205	09/29/98	7	7980	6.00	6.00	665		
2	ARI092206	09/29/98	7	7800	6.00	6.00	650		
	AR1092207	10/20/98	28						
	ARI092208	10/20/98	28						

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jerry Z. Jor. TERRA-MAR, INC. PE

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	09/29/98	Huitt-Zollars, Inc Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-74	Town of Addison - James Pierce, P.E.
		Town of Addison - Dave Wilde
SPECI	FICATIONS	PROJECT DATA

SPECIF				PROJE	
Strength (psi): 650				Placement Date:	09/21/98
Slump (in.):	3+/-1			Sampled By:	John Sullivan
Air Content (%):	5 - 8			Weather:	Clear
Concrete Temp (°F)) na		Supplier/Mix:	Ed Bell	
		FIELI	D DATA SET #1		
Ticket #:	14212	Time Batched:	na	Time Sampled:	10:30
Slump (in.):	2.50	Air Content:	5.1	Unit Weight (pcf):	na
Conc. Temp. (°F):	85	Ambient Temp. (°F):	na	Yardage (c.y.):	na
Placement Location	: Station 45+	50, north side of paving a	t Arapaho		
Remarks:					
		FIEL	D DATA SET #2	2	
Ticket #:	7058711	Time Batched:	na	Time Sampled:	1:45
Slump (in.):	2.00	Air Content:	5.0	Unit Weight (pcf):	na
Conc. Temp. (°F):	87	Ambient Temp. (°F):	98	Yardage (c.y.):	na
Placement Location	: Station 30+	07.33, left turn lane, south	n side		
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS									
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes		
		. <u>.</u>	(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)			
		t.								
	AR1092101	09/28/98	7	5760	6.00	6.00	480			
1	ARI092102	09/28/98	7	6720	6.00	6.00	560			
	ARI092103	10/19/98	28							
	ARI092104	10/19/98	28							
	AR1092105	09/28/98	7	7800	6.00	6.00	650			
2	ARI092106	09/28/98	7	8160	6.00	6.00	680			
	AR1092107	10/19/98	28							
	AR1092108	10/19/98	28							

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Juny J. Joge TERRA-MAR, INC.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS	FORT WO	RTH H	OUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/8/98 DC98-050-7	Teter Roberts, P.E. ierce, P.E. Ide				
SPECIFI	ROJECT DATA					
Strength (psi):	650			Placement Da	te: 9/24/98	
Slump (in.):	3+/-1			Sampled By:	John Sulliva	an
Air Content (%):	5 - 8			Weather:	Clear & war	m
Concrete Temp (°F):				Supplier/Mix:	Lattimore	
		FIEL	D DATA SE	T #1		
Ticket #:	6080933	Time Batched:		Time Sample	ed; 11:00	
Slump (in.):	2.50	Air Content:	5.1	Unit Weight (pc	:f):	
Conc. Temp. (°F):	82	Ambient Temp. (°F):	87	Yardage (c.y	(,):	
Placement Location:	Station 6+00	Southpaving Arapaho	Rd,			
Remarks:						
		FIEL	D DATA SE	Τ #2		
Ticket #:	13064	Time Batched:		Time Sample	ed: 3:45	
Slump (in.):	3.00	Air Content:	5.1	Unit Weight (pc	ກ):	
Conc. Temp. (°F):	85	Ambient Temp. (°F):		Yardage (c.y	:):	
	Westside of	Southwestern Bell next	to building,		*	
Remarks:			<u>.</u>			

	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes				
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
	ARI092401	10/1/98	7	8340	6.00	6.00	695					
1	ARI092402	10/1/98	7	7920	5.95	6.10	660					
	ARI092403	10/22/98	28									
	ARI092404	10/22/98	28		<u></u>							
2	AR1092405	10/1/98	7	7440	6.00	6.05	620					
	ARI092406	10/1/98	7	7680	6.00	6.10	640					
	ARI092407	10/22/98	28									
	ARI092408	10/22/98	28									

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
 (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. For PS TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Cor Arapaho Ro 10/8/98 DC98-050-6	bad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E.							
				Town of Addison - Dave Wilde							
SPECIFI	CATIONS			PROJI	ECT DATA						
Strength (psi):	650			Placement Date:	9/3/98						
Slump (in.):	3 - 5			Sampled By:	John Sullivan						
Air Content (%):	5 - 8			Weather:	Clear						
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell						
FIELD DATA SET #1											
Ticket #:	14285	Time Batched:	na	Time Sampled:	12:30						
Slump (in.):	3.00	Air Content:	5,0	Unit Weight (pcf):	na						
Conc. Temp. (°F):	90	Ambient Temp. (°F):	98	Yardage (c.y.):	na						
Placement Location:	Paving at A	rapaho Road, station 50+2	20								
Remarks:											
		FIELC	DATAS	SET #2							
Ticket #:		Time Batched:		Time Sampled:							
Slump (in.):		Air Content:	***************	Unit Weight (pcf):							
Conc. Temp. (°F):		Ambient Temp. (°F):									
Placement Location:		₩ · · · • • •									
Remarks:											

	CONCRETE COMPRESSION TEST RESULTS											
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes				
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
			-									
	ARI090305	9/10/98	7	7380	6.05	6.25	615					
1	ARI090306	9/10/98	7	7740	6.00	6.25	645					
	ARI090307	10/1/98	28	9120	6.00	6,25	760					
	ARI090308	10/1/98	28	8580	6.00	6.10	715					
						*						

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES. (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/8/98 DC98-050-	oad Improvements						
SPECIFI	PROJ	ECT DATA						
Strength (psi):	650			Placement Date:	9/3/98			
Slump (in.):	3 - 5			Sampled By:	John Sullivan			
Air Content (%):	5 - 8			Weather:	Clear			
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell			
		FIELD	DATA S	ET #1				
Ticket #:	na	Time Batched:	na	Time Sampled:	10:15			
Slump (in.):	2.50	Air Content:	5.1	Unit Weight (pcf):	na			
Conc. Temp. (°F):	89	Ambient Temp. (°F):	90	Yardage (c.y.):	na			
Placement Location:	Paving at A	rapaho Road						
Remarks:								
		FIELD	DATA S	ET #2	-			
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		Unit Weight (pcf):				
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):				
Placement Location:								
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS											
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set # Beam # Test Date Age Max. Load Average Average Modulus of Notes												
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
	ARI090301	9/10/98	7	7140	6.00	6.20	595					
1	ARI090302	9/10/98	7	6960	6.00	6.15	580					
	ARI090303	10/1/98	28	9120	6.00	6.20	740					
	ARI090304	10/1/98	28	8640	6.10	6.10	720					
2												

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

					RRA-MAR,				
							RIALS ENGIN		
							LUBBOCK AU	ISTIN	
		1	1050 Adie	es Lane, Dalla	s, Texas 752	29 Phone:9	72-488-8800		
	С	ONCRETE	E INSPE		D FLEXUF POINT LO		GTH TEST F	REPORT	
REPO	NT: JECT: DRT DATE: REPORT #:	Ed Bell Cor Arapaho Ro 9/21/98 DC98-050-7	oad impro	vements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
	SPECIF	ICATIONS		· · · · · ·			P	ROJECT DATA	
Stren	gth (psi):	650		_			Placement Dat		
	o (in.):			_			Sampled By:	Bryan Glennon	
	ontent (%):			_			Weather:	Cloudy	
Conci	rete Temp (°F)	:		-			Supplier/Mix:	Lattimore	
				FIE	LD DATA SE	ET #1			
Ticket #: 14406 Time Batched: 08:20							Time Sample	d: 9:00	
Slump (in.): 2.00 Air Content: 3.0						Unit Weight (pc:			
	Temp. (°F):		-	it Temp. (°F):		_	Yardage (c.y	.): 63	
	ment Location	Paving at st	tation F1.	26, 10' westbo	bund				
Rema	irks:								
				FIE	LD DATA SE	T # 2			
Ticket	t #:		_ т	ime Batched:		_	Time Sample	d:	
	o (in.):		_	Air Content:		_	Unit Weight (pc)	D:	
	Temp. (°F):		Ambien	t Temp. (°F):		_	Yardage (c.y.):	
	ment Location:								
Rema	rks:								
					-				
			со	NCRETE CO	MPRESSION	I TEST RESU	LTS		
			BEAMS MC			C31, TESTED PE	R ASTM C78		
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes	
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)		
	ARI091001	9/17/98	7	8700	5.85	6.20	725		
1	AR1091002	9/17/98	7	6840	5.80	6.25	570		
	ARI091003	10/8/98	28	10080	5.90	6.10	840		
	ARI091004	10/8/98	28	10020	6.00	6.25	835		

1

2

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE. (2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Juny For Por TERRA-MAR, INC.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/0 <i>5</i> /98 DC98-050-7	ad Improvements	Ed Bell Construction - Doug Huitt-Zollars, Inc Kenneth F Town of Addison - James Pie Town of Addison - Dave Wild					
SPECIFI	CATIONS			PROJECT DATA				
Strength (psi):	650			Placement Date:	09/25/98			
Slump (in.):	3+/-1			Sampled By:	John Sullivan			
Air Content (%):	5 - 8			Weather:	Clear			
Concrete Temp (°F)	na			Supplier/Mix:	Lattimore			
		FIELD	DATA S	ET #1				
Ticket #:	13073	Time Batched:	na	Time Sampled:	11: 0 0			
Slump (in.):	2.50	Air Content:	5.0	Unit Weight (pcf):	na			
Conc. Temp. (°F):	81	Ambient Temp. (°F):	90	Yardage (c.y.):	na			
Placement Location:	Arapaho Ro	ad exit next to SWB build	ling					
Remarks:								
		FIELD	DATA S	ET #2				
Ticket #:		Time Batched:		Time Sampled:				
Slump (in.):		Air Content:		Unit Weight (pcf):				
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):				
Placement Location:								
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS											
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78											
Set #	Set # Beam # Test Date Age Max. Load Average Average Modulus of Notes											
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)					
	AR1092501	10/02/98	7	7440	6.00	6.00	620					
1	ARI092502	10/02/98	7	7560	6.00	6.00	630					
	ARI092503	10/23/98	28									
	ARI092504	10/23/98	28									
							•					
2												

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Sum L. For, PE TERRA-MAR, INC.

TERRA-MAR

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW

11050 Ables Ln., Dallas, Texas 75229 phone: (972) 488-8800 fax: (972) 488-8080

Report of Moisture-Density Relationship

Client Project TMI Project No. TMI Report No. Report Date		ad Imp			Report Distribution	Town of Addison - Town of Addison -	James Pierce, P.E.
Material Origin: Sample Locatic Material Descri Material Use:	on: Eastb	Treated	Arapaho Road, s d Brown Clay	Project Inform	nation	Sampled By: Sample Date: Tested By:	M. Kashem 09/02/98 Jason Allen
		85. 91. Duy Denaty (bc) 77.	.0	ure Density Relation	Ship Curve No. 7		
		73.	31.0 33.0	35.0 37.0 Molsture Cont		43.0	
			Material Pr	operties and Test Inl	formation - Curve No.	7	
Maximum Dry Optimum Mois	ture Percent		0.6 pcf 6.6 %	Liquid Limit: Plastic Limit: Plasticity Index:		assing No. 200; ISCS:	43.8 %
Test Method(s): Rammer Descrij Remarks:			-A, D4318-B, D [.]		aration Procedure: N	foist	

TERRA-MAR, INC. Juny L. For Per The results presented in this report pertain only to the specific items tested. This report was produced for the exclusive use of the client. Any reproduction of this report, or any part therein, is strictly prohibited without the express written consent of TMI.

Reed 9-21-98

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	GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN											
11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800												
CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)												
CLIENT:Ed Bell ConstructionREPORT DISTRIBUTION:PROJECT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterREPORT DATE:09/11/98Huitt-Zollars, Inc Kenneth Roberts, P.E.TMI REPORT #:DC98-050-62Town of Addison - James Pierce, P.E.Town of Addison - Dave WildeTown of Addison - Dave Wilde												
SPECIF Strength (psi): Slump (in.): Air Content (%): Concrete Temp (°F)	·····	0.75= 487.5 (th)	PRO Placement Date: Sampled By: Weather: Supplier/Mix:	JECT DATA 09/02/98 Bryan Glennon Clear Ed Bell Construction							
		FIEL	D DATA SET	#1								
Ticket #: Slump (in.): Conc, Temp. (°F): Placement Location: Remarks:	14247 5.50 90 Paving, 20'	Time Batched: Air Content: Ambient Temp. (°F): north of south end and	09:30 4.5 na		Time Sampled: Unit Weight (pcf): Yardage (c.y.):	na						
			D DATA SET	#2		4.00						
Ticket #: Slump (in.): Conc. Temp. (°F): Placement Location: Remarks:	14255 4.00 90 Paving at Qu	Time Batched: Air Content: Ambient Temp. (°F): Jorum Road at station 6	01:00 4.0 na +00		Time Sampled: Unit Weight (pcf): Yardage (c.y.):	1:30 						

	CONCRETE COMPRESSION TEST RESULTS BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes		
1	ARI090201 ARI090202 ARI090203 ARI090204	09/09/98 09/09/98 09/30/98 09/30/98	7 7 28 28		6.00 6.00	6.00 6.00	450 450			
2	ARI090205 ARI090206 ARI090207 ARI090208	09/09/98 09/09/98 09/30/98 09/30/98	7 7 28 28		6.00 6.00	6.00 6.00	495 590	0Ł		

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

June L. Form. 14 TERRA-MAR, INC.

FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN DALLAS 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 9/10/98

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

Technician:

TEST DATA

9/3/98

M. Kashem

TMI REPORT NO .: DC98-050-166

> SPECIFICATIONS 95+ Percent Compaction:

opt+ Moisture Content (%):

		MATERIAL REFERENCE	CURVE	DATA							
CURVE	TEST				OPTIMUM	MAX. DRY					
NO.	METHOD	MATERIAL DESCRIPTIC	N		MOISTURE (%)	DENSITY (pcf)					
5	D698	Lime Treated Brown C	Gravel	25.7	93.6						
	IN-PLACE TEST RESULTS										
		DENSITY AND MOISTURE TESTS ARE PER AS									
TEST	ELEVATION		REF.	%	DRY	%					
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY					
1	Grade	East bound Arapaho Rd. 60+75	5	27.7	92.6	98.9					
2	Grade	East bound Arapaho Rd. 62+25	5	29.0	91.1	97.3					
3	Grade	East bound Arapaho Rd. 64+00	5	27.8	90.0	96.2					
4	Grade	East bound Arapaho Rd. 65+50	5	26.5	90.9	97.1					
					r						
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2356	STD N		608					
	1.000.000										

GAUGE I.D.: 10903 "R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS

REMARKS:

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT: Ed Bell Construction PROJECT: Arapaho Road Improvements REPORT DATE: 9/10/98 **DISTRIBUTION:**

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

Technician:

TEST DATA

MAX. DRY

DENSITY (pcf)

102.5

93.6

9/1/98

M. Kashem

TMI REPORT NO.: DC98-050-57
SPECIFICATIONS

TEST

METHOD

D698

D698

CURVE

NO.

6

5

Percent Compaction: 95% Moisture Content (%): 0pt+

MATERIAL REFERENCE CURVE DATA OPTIMUM OPTIMUM MATERIAL DESCRIPTION MOISTURE (%) Lime Treated Yellow & Brown Clay 21.0 Lime Treated Brown Clay 25.7 IN-PLACE TEST RESULTS Density AND MOISTURE TESTS ARE PER ASTM D2922, D3017, RESPECTIVELY

DENSITY AND MOISTURE TESTS ARE PER ASIM D2922, D3017, RESPECTIVELY							
TEST	ELEVATION		REF.	%	DRY	%	
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY	
1	Grade	West bound Arapaho Rd. station 53+25	6	24.2	102.1	99.6	
2	Grade	West bound Arapaho Rd. station 54+85	5	26.2	97.9	104.6	
3	Grade	West bound Arapaho Rd. station 56+50	5	29.1	90.9	97,1	
4	Grade	West bound Arapaho Rd. station 57+75	5	29.4	92.9	99.3	
5	Grade	West bound Arapaho Rd. station 58+70	5	29.5	92.0	98.3	
					-		
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2416	STD. N	OISTURE COUNT:	601	

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Jun TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:9/10/98

TMI REPORT NO .:

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

Technician:

TEST DATA

9/2/98

M. Kashem

SPECIFICATIONS
Percent Compaction: 95+
Moisture Content (%): 0pt+

DC98-050-63

MATERIAL REFERENCE CURVE DATA									
CURVE	TEST			OPTIMUM	MAX. DRY				
NO.	METHOD	MATERIAL DESCRIPTIO		MOISTURE (%)	DENSITY (pcf)				
5	D698	Lime Treated Brown Clay			25.7	93.6			
6	D698	Lime Treated Brown & Gray Clay with G			21.0	102. <u>5</u>			
		IN-PLACE TEST R		-					
	· · · · · · · · · · · · · · · · · · ·	DENSITY AND MOISTURE TESTS ARE PER AS							
TEST	ELEVATION		REF.	%	DRY	%			
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY			
1	Grade	East bound Arapaho Rd. station 53+50	6	22.8	101.3	98.8			
2	Grade	East bound Arapaho Rd. station 54+75	6	23.2	101.2	98.7			
3	Grade	East bound Arapaho Rd. station 56+00	6	24.4	99.4	97.0			
4	Grade	East bound Arapaho Rd. @ driveway @	6	23.7	99.2	96.8			
		Northwest corner							
5	Grade	East bound Arapaho Rd. @ driveway @	6	22.5	99.8	97.4			
		Southeast corner							
6	Grade	East bound Arapaho Rd. station 57+23	6	27.6	91.1	88.9			
7	Grade	East bound Arapaho Rd. @ spectrum	6	28.6	91.0	88.8			
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2414	STD. N	AOISTURE COUNT:	597			

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

<u>Luny</u> TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

Dallas Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS *Revised Copy - Report No.

Client:	Ed Bell Construction
Project:	Arapaho Road Improvements
Report No.:	DC98-050- 55 *
Report Date:	09/02/98
Sample Date:	08/31/98

Distribution: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

TEST NO.	LOCATION	ACTUAL DEPTH (in)	REQUIRED DEPTH
1	Westbound Arapaho, station 44+50	6.5	
2	Westbound Arapaho, station 43+25	7.0	
3	Westbound Arapaho, station 42+00	7.0	
4	Westbound Arapaho, station 41+25	7.0	
5	Eastbound Arapaho, station 41+50	6.5	
6	Eastbound Arapaho, station 42+25	7.0	

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L. For re TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN								
	11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800							
с	ONCRETE	INSPECTION AND (THIRD I		RAL STREM DADING)	IGTH TEST REI	PORT		
CLIENT:Ed Bell ConstructionREPORT DISTRIBUTION:PROJECT:Arapaho Road ImprovementsEd Bell Construction - Doug TeterREPORT DATE:09/14/98Huitt-Zollars, Inc Kenneth Roberts, P.E.TMI REPORT #:DC98-050-70Town of Addison - James Pierce, P.E.Town of Addison - Dave Wilde					berts, P.E.			
SPECIFI	ICATIONS					JECT DATA		
Strength (psi):	650				Placement Date:	09/04/98		
Slump (in.):					Sampled By:	Ed Emanuel		
Air Content (%):					Weather:	Sunny		
Concrete Temp (°F)	د • 				Supplier/Mix:	Ed Bell Construction		
		FIEL	D DATA SE	ET #1				
Ticket #:	14318	Time Batched:	09:45		Time Sampled:	9:55		
Slump (in.):	2.00	Air Content:	3.8		Unit Weight (pcf):	па		
Conc. Temp. (°F):	91	Ambient Temp. (°F):	97		Yardage (c.y.):	126		
	Paving at A	apaho Road, station 46+	-25					
Remarks:			4					
•		FIEL	D DATA SE	ET #2				
Ticket #:	14323	Time Batched:	11:00	_	Time Sampled:	11:22		
Slump (in.):		Air Content:	3.8	_	Unit Weight (pcf):	na		
Conc. Temp. (°F):	98	Ambient Temp. (°F):	98		Yardage (c.y.):	171		
	Paving at Ar	apaho Road, station 45+	-45					
Remarks:								

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Set # Beam # Test Date Age Max. Load Average Average Modulus of Notes (Days) (Ibs) Depth, D Width, B Rupture (psi) Image: Comparison of the second se										
	ARI090401	09/11/98	7		6.00	6.00	510				
1	AR1090402	09/11/98	7		6.00	6.00	485				
	AR1090403	10/02/98	28								
	AR1090404	10/02/98	28								
	ARI090405	09/11/98	7		6.00	6.00	390				
2	ARI090406	09/11/98	7		6.00	6.00	470				
	ARI090407	10/02/98	28								
	AR1090408	10/02/98	28								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. Fro, R.-JTERRA-MAR, INC.

	GEOTEC	HNICAL ENVIRONM	ENTAL AND	MATERIALS ENGINEER	S	
	DALLAS	FORT WORTH HOL	ISTON LONG	VIEW LUBBOCK AUSTIN		
	1	1050 Ables Lane, Dallas,	Texas 75229	Phone:972-488-8800		
C	ONCRETE	E INSPECTION AND	FLEXURAL S	STRENGTH TEST REPO	RT	
		(THIRD I	POINT LOADI	NG)	-	
CLIENT:	Ed Bell Cor	struction	REP	ORT DISTRIBUTION:		
PROJECT:	PROJECT: Arapaho Road Improvements Ed Bell Construction - Doug Teter					
REPORT DATE:	09/14/98		Huitt	-Zollars, Inc Kenneth Rober	IS, P.E.	
TMI REPORT #:	DC98-050-7	70	Tow	n of Addison - James Pierce, F	P.E.	
			Tow	n of Addison - Dave Wilde		
SPECIF	ICATIONS	FIEL	D DATA SET #3	PROJEC	CT DATA	
Ticket #:	14333	Time Batched:	13:40	Time Sampled:	14:08	
Slump (in.):	3.50	Air Content:	4.0	Unit Weight (pcf):	na	
Conc. Temp. (°F):	94	Ambient Temp. (°F):	103	Yardage (c.y.):	261	
Placement Location	: Paving at A	rapaho Road, station 44+	-50			
Remarks:						
		FIEL	D DATA SET #4			
Ticket #:		Time Batched:		Time Sampled:		
Slump (in.):		Air Content:		Unit Weight (pcf):		
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):		
Placement Location	**************************************	• • • • •				
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS									
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes		
	ARI090409	09/11/98	7				545			
3	ARI090410	09/11/98	7				425			
	AR1090411	10/02/98	28							
	AR1090412	10/02/98	28							
4										

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Henry For PS-TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT: Ed Bell Construction PROJECT: Arapaho Road Improvements REPORT DATE: 9/8/98 **DISTRIBUTION:**

Ed Bell Construction - Doug Teter Huitt Zollar, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde, P.E.

Date Tested:

Technician:

TEST DATA

8/3/98

M. Kashem

TMI REPORT NO.: DC98-050-54 SPECIFICATIONS Percent Compaction: 95+ Moisture Content (%): 0pt+

	MATERIAL REFERENCE CURVE DATA									
CURVE NO.	TEST METHOD	MATERIAL DESCRIPTIO	OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pcf)						
5	D698	Lime Treated Brown C	25.7	95.6						
		IN-PLACE TEST R DENSITY AND MOISTURE TESTS ARE PER AS								
TEST NO.	ELEVATION OR LIFT	LOCATION	REF. CURVE	% MOISTURE	DRY DENSITY	% DENSITY				
1 2	Grade Grade	West bound Arapaho Rd. @ station 44+ West bound Arapaho Rd. @ station 43+	5 5	26.4 26.2	96.8 98.6	101.3 103.1				
3 4	Grade Grade	West bound Arapaho Rd. @ station 41+ West bound Arapaho Rd. @ station 40+	5 5	27.3 26.1	100.4 101.3	105.0 106.0				
5	Grade	East bound Arapaho Rd, @ station 41+5		26.1	100.8	105.4				
6	Grade	East bound Arapaho Rd, @ station 42+8		26.5	99.5	104.1				
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2363	STD. N	OISTURE COUNT:	596				

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Juny L. For Ve TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvem 9/4/98 DC98-050-39	ents	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde				
SPEC	FICATIONS			PROJECT	T DATA		
Strength (psi):	4000			Placement Date:	8/5/98		
Slump (in.):	4			Sampled By:	E.M.		
Air Content (%):	na			Weather:	Cloudy & warm		
Concrete Temp (°F):	95			Supplier/Mix:	Lattimore #42		
	**************************************	FIELD DA	TA SET #1				
Ticket #:	7056035	Time Batched:	01:34	Time Sampled:	2:25		
Shump (in.):	3.50	Air Content:	na	Unit Weight (pcf):			
Conc. Temp. (°F):	94 A	mbient Temp. (°F):	91	Yardage (c.y.):			
Placement Location:	Retaining wall - East end						
Remarks:							
		FIELD DA	TA SET #2				
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):	*****	Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):	A	mbient Temp. (°F):		Yardage (c.y.):			
Placement Location:							
Remarks [.]							

	CONCRETE COMPRESSION TEST RESULTS									
				RED PER ASTM C31						
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes		
				-						
	ARI080501	8/12/98	7	115150	28.27	4070	U			
1	ARI080502	9/2/98	28	127200	28.27	4500	U			
	ARI080503	9/2/98	28	135210	28.27	4780	U			
	ARI080504	DISCARD								

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in, UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Jerry L. For Piz TERRA-MAR. Inc MAR, Inc.

	-			•••••					
	DALLAS					IN			
	11	050 Ables Lane, Dallas,	. lexas /52	29 Phone:	972-488-8800				
C	ONCRETE	INSPECTION AND) FLEXUR	AL STRE	NGTH TEST REI	PORT			
		(THIRD	POINT LC	ADING)					
CLIENT:	Ed Bell Con	struction		REPORT D	ISTRIBUTION:				
PROJECT:	Arapaho Roa	ad Improvements		Ed Bell Cor	struction - Doug Te	ler			
REPORT DATE:	10/01/98			Huitt-Zollar	s, Inc Kenneth Rol	berts, P.E.			
TMI REPORT #:	DC98-050-6	2			dison - James Pierc	e, P.E.			
				Town of Ad	dison - Dave Wilde				
SPECIF	ICATIONS					JECT DATA			
Strength (psi):	650				Placement Date:	09/02/98			
Slump (in.):	. <u></u>				Sampled By:	Bryan Glennon			
Air Content (%):					Weather:	Clear			
Concrete Temp (°F)	• •				Supplier/Mix:	Ed Bell Construction			
		FIEL	D DATA SE	T #1					
Ticket #:	14247	Time Batched:	09:30		Time Sampled:	10:00			
Slump (in.):	5.50	Air Content:	4.5		Unit Weight (pcf):				
Conc. Temp. (°F):	90	Ambient Temp. (°F):	na	-	Yardage (c.y.):	60			
Placement Location	Paving, 20'	north of south end and	15' east of w	est end					
Remarks:									
	_	FIEL	D DATA SE	T #2					
Ticket #:	14255	Time Batched:	01:00		Time Sampled:	1:30			
Slump (in.):	4.00	Air Content:	4.0		Unit Weight (pcf):	na			
Conc. Temp. (°F):									
	Paving at Qu	Jorum Road at station 6	+00						
Remarks:									

I

	CONCRETE COMPRESSION TEST RESULTS										
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78										
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes			
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)				
	ARI090201	09/09/98	7	5400	6.00	6.00	450				
1	ARI090202	09/09/98	7	5400	6.00	6.00	450				
	ARI090203	09/30/98	28	7980	6.00	6.00	665				
	ARI090204	09/30/98	28	8820	6.00	6.00	735				
	AR1090205	09/09/98	7	5940	6.00	6.00	495				
2	ARI090206	09/09/98	7	7080	6.00	6.00	590				
	ARI090207	09/30/98	28	7980	6.00	6.00	665				
	ARI090208	09/30/98	28	7860	6.00	6.00	655				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING. (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231



GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction		REPORT DIS	TRIBUTION:					
PROJECT:	Arapaho Road Improveme	nts	Ed Bell Constr	uction - Doug Teter					
REPORT DATE:	9/29/98		Huitt-Zollars, Inc. Kenneth Roberts, P.E.						
TMI REPORT #:	DC98-050-36		Town of Addison - James Pierce, P.E.						
			Town of Addison - Dave Wilde						
SPECI	FICATIONS		PROJECT DATA						
Strength (psi):	4000			Placement Date:	8/3/98				
Slump (in.): 4		_		Sampled By:	E.M.				
Air Content (%): na		-		Weather:	Hot				
Concrete Temp (°F):	95	-		Supplier/Mix:	Lattimore #42				
		FIELD DA	TA SET #1						
Ticket #:	53591	Time Batched:	02;00	Time Sampled:	3:10				
Shump (in.):	3.00	Air Content:	na	Unit Weight (pcf):	na				
Conc. Temp. (°F):	98 An	abient Temp. (°F):	102	Yardage (c.y.):					
Placement Location:	Retaining wall - Northside								
Remarks:									
		FIELD DA	TA SET #2						
Ticket #:		Time Batched:		Time Sampled:					
Slump (in.):		Air Content:							
Conc. Temp. (°F):	Ал	nbient Temp. (°F):		Yardage (c.y.):					
Placement Location:									
Remarks:									

		navis X M. Miller William (Miller) and an	,	RETE COMPRE			-	· · · · · · · · · · · · · · · · · · ·
Set #	Cylinder #	Test Date	Age (Days)	RED PER ASTM C31 Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
	ARI080301	8/10/98	7	89110	28.27	3150	U	
1	ARI080302	8/31/98	28	100630	28.27	3560	U	* * Does not meet specification
	ARI080303	8/31/98	28	91480	28.27	3240	U	* * Does not meet specificatio
	ARI080304	9/28/98	56	113460	28,27	4010	U	

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

DERRA-MAR, Inc.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Con Arapaho Ro 10/01/98 DC98-050-7	ad improvements		Ed Bell Huitt-Zo Town of	T DISTRIBUTION: Construction - Doug Teter Ilars, Inc Kenneth Robe Addison - James Pierce, Addison - Dave Wilde	erts, P.E.
SPECIFI	CATIONS				PROJE	CT DATA
Strength (psi):	650				Placement Date:	09/23/98
Slump (in.):	3+/-1				Sampled By:	John Sullivan
Air Content (%):	5 - 8				Weather:	Clear
Concrete Temp (°F)	na				Supplier/Mix:	Lattimore
	÷	FIEL	D DATA S	ET #1		,
Ticket #:	6080783	Time Batched:	na		Time Sampled:	8:45
Slump (in.):	3.00	Air Content:	5.5		Unit Weight (pcf):	na
Conc. Temp. (°F):	80	Ambient Temp. (°F):	80		Yardage (c.y.):	па
Placement Location:	South end o	f Arapaho, west of Tollwa	ay, station	66+50		
Remarks:						
		FIELI	D DATA S	ET #2		
Ticket #:	13024	Time Batched:	na		Time Sampled:	12:00
Slump (in.):	2.50	Air Content:	5.4		Unit Weight (pcf):	na
Conc. Temp. (°F):	84	Ambient Temp. (°F):	88		Yardage (c.y.):	na
Placement Location:	South end o	f Arapaho, west of Tollwa	ay, station	64+50		

Placement Remarks:

			-					
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
	ARI092301	09/30/98	7	9480	6.00	6.00	790	
1	ARI092302	09/30/98	7	8760	6.00	6.00	730	
	AR1092303	10/21/98	28					
	ARI092304	10/21/98	28					
	ARI092305	09/30/98	7	8820	6.00	6.00	735	
2	ARI092306	09/30/98	7	7500	6.00	6.00	625	
	ARI092307	10/21/98	28					
	ARI092308	10/21/98	28					

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

TERRA-MAR, INC

	GEOTEC	HNICAL ENVIRONM	ENTAL AND	MATERIALS ENGINEE	RS							
	DALLAS	FORT WORTH HOU	ISTON LONG	SVIEW LUBBOCK AUSTI	N							
	1	1050 Ables Lane, Dallas,	Texas 75229	Phone:972-488-8800								
<u> </u>				STRENGTH TEST REP								
	ONCRET											
			POINT LOAD	ING)								
CLIENT:	Ed Bell Co	nstruction	RE	PORT DISTRIBUTION:								
PROJECT:	Arapaho R	oad Improvements	Ed	Bell Construction - Doug Tete	er							
REPORT DATE: 10/01/98 Huitt-Zollars, Inc Kenneth Roberts, P.E.												
TMI REPORT #: DC98-050-76 Town of Addison - James Pierce, P.E.												
			Tov	vn of Addison - Dave Wilde								
SPECIF	ICATIONS	FIELD	DATA SET #3	B PROJ	ECT DATA							
Ticket #:	na	_ Time Batched:	na	Time Sampled:	4:40							
Slump (in.):	2,50	Air Content:	5.0	Unit Weight (pcf):								
Conc. Temp. (°F):	na	_ Ambient Temp. (°F):	90	Yardage (c.y.): _	na							
	: South end	of Arapaho, station 6+00										
Remarks:												
Tisles #		Time Batched:	D DATA SET #4									
Ticket #: Slump (in.):		Air Content:		Time Sampled:								
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):								
Placement Location												
Remarks:	•											

	CONCRETE COMPRESSION TEST RESULTS									
			BEAMS MC	LDED AND CUR	ED PER ASTM (31, TESTED PE	R ASTM C78			
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes		
	ARI092309	09/30/98	7	8580	6.00	6.00	715			
3	ARI092310 ARI092311 ARI092312	09/30/98 10/21/98 10/21/98	7 28 28	7440	6.00	6.00	620			
4		10,21,00	20							

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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TERRA-MAR, INC

DALLAS	FORT WORTH	HOUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT:	Ed Bell Con	struction ad Improvements		REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter				
REPORT DATE:	09/21/98	au improvements			-			
TMI REPORT #:	DC98-050-7	2		Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E.				
TIMI REPORT #.	DC30-030-1	ų			son - Dave Wilde	⊂, Г.⊑.		
SPECIF	ICATIONS				PRO.	JECT DATA		
Strength (psi):	650				Placement Date:	09/10/98		
Slump (in.):					Sampled By:	Bryan Glennon		
Air Content (%):					Weather:	Cloudy		
Concrete Temp (°F):					Supplier/Mix:	Lattimore		
*****		FIEL	D DATA SI	ET #1				
Ticket #:	14406	Time Batched:	08:20		Time Sampled:	9:00		
Slump (in.):	2.00	Air Content:	3.0	L	Jnit Weight (pcf):	na		
Conc. Temp. (°F):	85	Ambient Temp. (°F):	70		Yardage (c.y.):	63		
Placement Location:	Paving at sta	ation F1.26, 10' westbour	nd					
Remarks:								
		FIELI	D DATA SI	ET #2		***		
Ticket #:		Time Batched:			Time Sampled:			
Slump (in.):		Air Content:		L	Jnit Weight (pcf): _			
Conc. Temp. (°F):		Ambient Temp. (*F):			Yardage (c.y.):			
Placement Location:								
Remarks:	•••••		-					
		CONCRETE COM	PRESSION	V TEST RESUL	LTS			
	E	BEAMS MOLDED AND CURED	PER ASTM	C31, TESTED PER	R ASTM C78			

	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes		
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)			
	ARI091001	09/17/98	7		6.00	6.00	725			
1	ARI091002	09/17/98	7		6.00	6.00	570			
	ARI091003	10/08/98	28							
	ARI091004	10/08/98	28							
2										

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS; C138, C143, C172, C231

Juny L. For TERRA-MAR,

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvemen 08/31/98 DC98-050-36	ts	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECI	FICATIONS			PROJECT	DATA	
Strength (psi):	4000			Placement Date:	08/03/98	
Slump (in.):	4			Sampled By:	E.M.	
Air Content (%):	<u>na</u>			Weather:	Hot	
Concrete Temp (°F):	95			Supplier/Mix:	Lattimore #42	
		FIELD DA	TA SET #1			
Ticket #:	53591	Time Batched:	02:00	Time Sampled:	3:10	
Slump (in.):	3.00	Air Content:	na	Unit Weight (pcf):	па	
Conc. Temp. (°F):	98 Am	bient Temp. (°F):	102	Yardage (c.y.):	10	
Placement Location:	Retaining wall - Northside					
Remarks:						
****		FIELD DA	TA SET #2			
Ticket #:		Time Batched:		Time Sampled:	·····	
Slump (in.):		Air Content:		Unit Weight (pcf):		
Conc. Temp. (°F):	Aml	bient Temp. (°F);		Yardage (c.y.):		
Placement Location:		<u></u>				
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS							
Į.	(YLINDERS M	OLDED AND CU	RED PER ASTM C31			PER	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	ARI080301 ARI080302 ARI080303 ARI080304	08/10/98 08/31/98 08/31/98 09/28/98	7 28 28 56	89110 100630 91480	28.27 28.27 28.27	3150 3560 3240	υ	 * • Does not meet specification * • Does not meet specification

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 (3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 (4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Surry I For PE TERRA-MAR, Inc. 15

Red 9-21-98

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

Dallas Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client:	Ed Bell Construction	Distribution:
Project:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
Report No.:	DC98-050-65	Huitt-Zollars, Inc Kenneth Roberts, P.E.
Report Date:	09/04/98	Town of Addison - James Pierce, P.E.
Sample Date:	09/03/98	Town of Addison - Dave Wilde

TEST		ACTUAL	REQUIRED
NO.	LOCATION	DEPTH (in)	DEPTH
1	Eastbound Arapaho, station 66+30	7.0	
2	Eastbound Arapaho, station 65+50	7.0	
3	Eastbound Arapaho, station 64+75	6.5	
4	Eastbound Arapaho, station 64+00	7.50	
5	Eastbound Arapaho, station 63+25	7.0	
- 6	Eastbound Arapaho, station 62+50	8.0	
7	Eastbound Arapaho, station 61+75	7.5	
8	Eastbound Arapaho, station 61+00	7.0	

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Juny L For po TERRA-MAR, INC.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client:	Ed Bell Construction
Project:	Arapaho Road Improvements
Report No.:	DC98-050-59
Report Date:	09/04/98
Sample Date:	09/01/98

Dallas

Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Distribution:

TEST		ACTUAL	REQUIRED
NO.	LOCATION	DEPTH (in)	DEPTH
1	Westbound Arapaho, station 58+50	6.75	
2	Westbound Arapaho, station 57+75	7.25	
3	Westbound Arapaho, station 57+00	7.0	
4	Westbound Arapaho, station 56+25	7.25	
5	Westbound Arapaho, station 55+50	7.0	
6	Westbound Arapaho, station 54+75	7.0	
7	Westbound Arapaho, station 54+00	7.25	
8	Westbound Arapaho, station 53+25	7.50	
	· · · · · · · · · · · · · · · · · · ·		

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TERRA-MAR/INC.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

Dallas Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client:	Ed Bell Construction	
Project:	Arapaho Road Improvements	
Report No.:	DC98-050-64	
Report Date:	09/04/98	
Sample Date:	09/02/98	•

Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

~ .

Distribution:

TEST NO.	LOCATION	ACTUAL DEPTH (in)	REQUIRED DEPTH
1	Eastbound Arapaho, station 53+75	7.5	
2	Eastbound Arapaho, station 54+50	7.5	
3	Eastbound Arapaho, station 55+25	7.0	
4	Eastbound Arapaho, station 56+50	7.5	
5	Eastbound Arapaho, station 57+23	6.25	
6	Eastbound Arapaho, SE corner driveway	7.0	
7	Eastbound Arapaho, NW corner driveway	7.0	
8	Eastbound Arapaho at Spectrum	6.5	

TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:	Ed Bell Construction
PROJECT:	Arapaho Road Improvements
REPORT DATE:	09/04/98
TMI REPORT #:	DC98-050-58

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

11-

Test Method:		Technician:	M. Kashem	
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	09/01/98	
Minimum % Passing No. 4 Sieve:	60	Stabilizing Agent	Lime	

TEST NUMBER	LOCATION	PERCENT PASSING 13/4" SIEVE	PERCENT PASSING #4 SIEVE
		/	/
1	Westbound Arapaho Rd, station 57+50	100 /	66.5
2	Westbound Arapaho Rd, station 54+85	100	73.2
· · · ·			

Remarks:

TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS	FORT WORTH	I HOUSTON	LONGVIEW	LUBBOCK	AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	ECT: Arapaho Road Improvements RT DATE: 09/16/98			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS			PROJ	ECT DATA		
Strength (psi):	650			Placement Date:	09/03/98		
Slump (in.):	3 - 5			Sampled By:	John Sullivan		
Air Content (%):	5 - 8	······		Weather:	Clear		
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell		
		FIELD	DATA SE	ET #1			
Ticket #:	14285	Time Batched:	па	Time Sampled:	12:30		
Slump (in.):	3.00	Air Content:	5.0	Unit Weight (pcf):	na		
Conc. Temp. (°F):	90	Ambient Temp. (°F):	98	Yardage (c.y.):	ņa 🛛		
Placement Location:	Paving at A	rapaho Road, station 50+2	20				
Remarks:							
		FIELD	DATA SE	ET #2			
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):			
Placement Location:							
Remarks:							

	CONCRETE COMPRESSION TEST RESULTS								
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78								
Set #	Beam #	Test Date	Age	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes	
			(Days)	(105)		VVIGUI, D	Rupture (psi)		
	ARI090305	09/10/98	7		6.00	6.00	615		
1	ARI090306	09/10/98	7		6.00	6.00	645		
	ARI090307	10/01/98	28						
	ARI090308	10/01/98	28					·····	
2									

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

JERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:09/04/98TMI REPORT #:DC98-050-60

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method:	Technician:	M. Kashem		
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	09/01/98	
Minimum % Passing No. 4 Sieve:	60	_Stabilizing Agent _	Lime	

TEST NUMBER	LOCATION	PERCENT PASSING 13/4" SIEVE	PERCENT PASSING #4 SIEVE	
				OK
1	Eastbound Arapaho Rd, station 54+00	100 100	74.6	•
2	Eastbound Arapaho Rd, station 56+25	100 🗸	66.9	
			· · · · · · · · · · · · · · · · · · ·	
	· · · · · · · · · · · · · · · · · · ·			

Remarks:

TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:	Ed Bell Construction
PROJECT:	Arapaho Road Improvements
REPORT DATE:	09/04/98
TMI REPORT #:	DC98-050-68

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method:	Technician:	M. Kashem		
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	09/02/98	
Minimum % Passing No. 4 Sieve:	60	Stabilizing Agent	Lime	

		PERCENT	PERCENT PASSING
TEST NUMBER	LOCATION	1.34" SIEVE	#4 SIEVE
			67.4 DK
1	Eastbound Arapaho Rd, station 62+00	100 1	
2	Eastbound Arapaho Rd, station 64+50	100 V	65.5 V
····			
·····			

Remarks:

TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvements 09/16/98 DC98-050-67			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIF	CATIONS			PROJ	ECT DATA		
Strength (psi):	650			Placement Date:	09/03/98		
Slump (in.):	3 - 5			Sampled By:	John Sullivan		
Air Content (%):	5 - 8			Weather:	Clear		
Concrete Temp (°F)	95			Supplier/Mix:	Ed Bell		
		FIELD	DATAS	SET #1			
Ticket #:	na	Time Batched:	па	Time Sampled:	10:15		
Slump (in.):	2.50	Air Content:	5.1	Unit Weight (pcf):	na		
Conc. Temp. (°F):	89	Ambient Temp. (°F):	90	Yardage (c.y.):	na		
Placement Location:	Paving at A	rapaho Road					
Remarks:							
			DATAS				
Ticket #:		Time Batched:		Time Sampled:			
Slump (in.):		Air Content:		Unit Weight (pcf):			
Conc. Temp. (°F):				Yardage (c.y.):			
Placement Location:							
Remarks:				······			

	CONCRETE COMPRESSION TEST RESULTS								
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78								
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes	
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)		
	AR1090301	09/10/98	7		6.00	6,00	595		
1	AR1090302	09/10/98	7		6.00	6,00	580		
	AR1090303	10/01/98	28						
	AR1090304	10/01/98	28						
2									
					:				

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jerra-Mar, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUS
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11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

CONCRETE INSPECTION AND FLEXURAL STRENGTH TEST REPORT (THIRD POINT LOADING)

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:09/14/98TMI REPORT #:DC98-050-71			REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde			
SPECIFI	CATIONS				ECT DATA	
Strength (psi):	650			Placement Date:	09/08/98	
Slump (in.):				Sampled By:	John Sullivan	
Air Content (%):				Weather;	Clear	
Concrete Temp (°F):				Supplier/Mix:	Ed Bell/Lattimore	
		FIELI	D DATA S	ET #1		
Ticket #:	14360	Time Batched:	na	Time Sampled:	12:45	
Slump (in.):	3.00	Air Content:	na	Unit Weight (pcf):	па	
Conc. Temp. (°F):	91	Ambient Temp. (°F):	104	Yardage (c.y.):	na	
Placement Location:	Paving at A	rapaho Road		— —		
Remarks:		· ·				
		FIELI	D DATA S	ET #2		
Ticket #:	607754	Time Batched:	ла	Time Sampled:	1:20	
Slump (in.):	3.00	Air Content:	5.1	Unit Weight (pcf):	ла	
Conc. Temp. (°F):	91	Ambient Temp. (°F):	104	Yardage (c.y.):	ла	
Placement Location: Remarks:	Paving at A	rapaho Road				

	CONCRETE COMPRESSION TEST RESULTS									
	BEAMS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C78									
Set #	Beam #	Test Date	Age	Max. Load	Average	Average	Modulus of	Notes		
			(Days)	(lbs)	Depth, D	Width, B	Rupture (psi)			
	AR1090801	09/15/98	7		6.00	6.00	580			
1	ARI090802	09/15/98	7		6.00	6.00	560			
	ARI090803	10/06/98	28							
	ARI090804	10/06/98	28							
	AR1090805	09/15/98	7		6.00	6.00	515			
2	AR1090806	09/15/98	7		6.00	6.00	500			
	ARI090807	10/06/98	28							
	ARI090808	10/06/98	28							

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

June L. Jon pg JERRA-MAR, INC.

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	GEOTECH	INICAL ENVIRONM	ENTAL AN	D MATERIALS ENGINE	ERS
	DALLAS	FORT WORTH HOL	<u>ISTON LOI</u>	<u>NGVIEW LUBBOCK AUS</u>	<u>FIN</u>
	11	1050 Ables Lane, Dallas,	Texas 75229	Phone:972-488-8800	
C	ONCRETE	INSPECTION AND		L STRENGTH TEST RE	PORT
· · ·					runi
			POINT LOA	DING)	
CLIENT:	Ed Bell Con	struction	R	EPORT DISTRIBUTION:	
PROJECT:	Arapaho Ro	ad Improvements	E	d Bell Construction - Doug Te	ter
REPORT DATE:	09/14/98			luitt-Zollars, Inc Kenneth Ro	
TMI REPORT #:	DC98-050-7	1		own of Addison - James Piero	-
			Т	own of Addison - Dave Wilde	
SPECIF	ICATIONS	FIEL	D DATA SET	#3 PRC	JECT DATA
Ticket #:	6079798	Time Batched;	03:14	Time Sampled:	4:00
Slump (in.):	3.00	Air Content:	5.0	Unit Weight (pcf):	na
Conc. Temp. (°F):	92	Ambient Temp. (°F):	107	Yardage (c.y.):	na
Placement Location:	Paving at A	apaho Road		-	
Remarks:					
<u></u>			NATA OFT	11 4	
Ticket #:			D DATA SET		
		Time Batched:		Time Sampled:	
Slump (in.): Conc. Temp. (°F):		Air Content: Ambient Temp. (°F):		Yardage (c.y.):	
Placement Location:		Annoin Lemp. (F).		raidage (C.y.).	
Remarks:		•			
n van de ro.					•••••

	CONCRETE COMPRESSION TEST RESULTS							
			BEAMS MC	LDED AND CUR	ED PER ASTM	31, TESTED PE	R ASTM C78	
Set #	Beam #	Test Date	Age (Days)	Max. Load (lbs)	Average Depth, D	Average Width, B	Modulus of Rupture (psi)	Notes
	ARI090809	09/15/98	7		6.00	6.00	610	
3	ARI090810 ARI090811	09/15/98 10/06/98	7 28		6.00	6.00	570	
	ARI090812	10/06/98	28					
4								

(1) SPAN LENGTH OF 18 INCHES, UNLESS NOTED ABOVE.

(2) SPECIMENS GROUND PRIOR TO TESTING, LEATHER SHIMS USED DURING TESTING.
(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Jury J. J. P. P. TERRA-MAR, INC.

Dallas Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client:	Ed Bell Construction	Distribution:
Project:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
Report No.:	DC98-050-45	Huitt-Zollars, Inc Kenneth Roberts, P.E.
Report Date:	09/02/98	Town of Addison - James Pierce, P.E.
Sample Date:	08/31/98	Town of Addison - Dave Wilde

TEST		ACTUAL	REQUIRED
NO.	LOCATION	DEPTH (in)	DEPTH
1	Westbound Arapaho, station 44+50	6.5	
2	Westbound Arapaho, station 43+25	7.0	
3	Westbound Arapaho, station 42+00	7.0	
4	Westbound Arapaho, station 41+25	7.0	
5	Eastbound Arapaho, station 41+50	6.5	
6	Eastbound Arapaho, station 42+25	7.0	

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TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:09/02/98TMI REPORT #:DC98-050-56

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method:		Technician:	M. Kashem	
Minimum % Passing 1 3/4" Sieve: _	100	Date Tested:	08/31/98	
Minimum % Passing No. 4 Sieve:	60	 Stabilizing Agent	Lime	

TEST NUMBER	LOCATION	PERCENT PASSING 134" SIEVE	PERCENT PASSING #4 SIEVE
1	Westbound Arapaho, station 44+50	100	63.5
		<u> </u>	
Pomarke:			

Remarks:

TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:	Ed Bell Construction
PROJECT:	Arapaho Road Improvements
REPORT DATE:	09/02/98
TMI REPORT #:	DC98-050-51

DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Test Method:		Technician:	M. Kashem	
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	08/28/98	
Minimum % Passing No. 4 Sieve:	60	Stabilizing Agent	Lime	

		PERCENT PASSING	PERCENT PASSING
TEST NUMBER	LOCATION	134"SIEVE	KA SIEVE
1	Westbound Arapaho, station 51+80	100	67.3
2	Westbound Arapaho, station 47+50	100	66.8
3	Quorum Rd, station 4+95	100	64.5
emarks:			1

R, INC.

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW LUBBOCK

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: (972)488-8080

STABILIZED SOIL GRADATION REPORT

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:09/02/98TMI REPORT #:DC98-050-48

Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

DISTRIBUTION:

Test Method:		Technician:	M. Kashem	
Minimum % Passing 1 3/4" Sieve:	100	Date Tested:	08/27/98	
Minimum % Passing No. 4 Sieve:	60	Stabilizing Agent	Lime	

TEST NUMBER	LOCATION	PERCENT PASSING 134" SIEVE	PERCENT PASSING #4 SIEVE
TEST HURGEN	LLOWING	F 374 - 316, 8 C	HA DICAC
1	E.bound Arapaho @ WB entrance, station 4+08	100	64.7
2	Eastbound Arapaho, station 45+52	100	68.1
3	Eastbound Arapaho, station 45+82	100	70.1

Remarks:

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L. Fre. Pa TERRA-MAR, INC

Dallas Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client:	Ed Bell Construction	Distribution:
Project:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
Report No.:	DC98-050-53	Huitt-Zollars, Inc Kenneth Roberts, P.E.
Report Date:	09/02/98	Town of Addison - James Pierce, P.E.
Sample Date:	08/28/98	Town of Addison - Dave Wilde

TEST		ACTUAL	REQUIRED
NO.	LOCATION	DEPTH (in)	DEPTH
1	Quorum Drive @ station 2+75	7.5	
2	Quorum Drive @ station 3+50	7.0	
3	Quorum Drive @ station 4+25	7.5	
4	Quorum Drive @ station 5+50	7.5	
5	Westbound Arapaho, station 51+80	6.5	
6	Westbound Arapaho, station 51+05	6.5	
7	Westbound Arapaho, station 50+20	7.0	
8	Westbound Arapaho, station 49+45	7.5	
9	Westbound Arapaho, station 48+70	7.0	
10	Westbound Arapaho, station 47+95	7.0	
11	Westbound Arapaho, station 47+20	7.0	
12	Westbound Arapaho, station 46+45	7.0	
13	Westbound Arapaho, station 45+70	7.0	

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Dallas Fort Worth Houston Austin Longview Lubbock

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8080 Fax: 972-488-8080

LIME TREATED SOIL THICKNESS DETERMINATIONS

Client:	Ed Bell Construction	Distribution:
Project:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
Report No.:	DC98-050-46	Huitt-Zollars, Inc Kenneth Roberts, P.E.
Report Date:	09/02/98	Town of Addison - James Pierce, P.E.
Sample Date:	08/27/98	Town of Addison - Dave Wilde

TEST NG.	LOCATION	ACTUAL DEPTH (in)	REQUIRED
1	Eastbound Arapaho, station 43+50	6.5	
2	Eastbound Arapaho, station 44+25	7.0	
3	E.bound Arapaho @ WB entrance sta 4+08	6.5	
4	E.bound Arapaho @ WB entrance sta 4+75	6.5	
5	Eastbound Arapaho, station 45+00	7.0	
6	Eastbound Arapaho, station 45+75	7.0	
7	Eastbound Arapaho, station 46+50	7.0	
8	Eastbound Arapaho, station 47+25	7.0	
9	Eastbound Arapaho, station 48+00	7.0	
10	Eastbound Arapaho, station 48+75	7.0	
11	Eastbound Arapaho, station 49+50	7.0	
12	Eastbound Arapaho, station 50+25	7.5	
13	Eastbound Arapaho, station 51+00	7.0	
14	Eastbound Arapaho, station 51+65	7.5	

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1:

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:08/31/98TMI REPORT NO.:DC98-050-49

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SP	ECIFICATIO	NS			TEST DATA	
	nt Compaction:			Date Tested:	08/27/98	
Moistu	re Content (%):	Opt +		Technician:	M. Kasheem	
		DATA				
CURVE	TEST				ортімим	MAX. DRY
NO.	METHOD	MATERIAL DESCRIPT	TON		MOISTURE (%)	DENSITY (pc
5	D698	Lime Treated Brown Cl	ay		25.7	93.6
6	D698	Lime Treated Yellow &	Tan Clay		21.0	102.5
		IN-PLACE TEST				
TEST	ELEVATION	DENSITY AND MOISTURE TESTS ARE PER A	STM D2922, REF.	03017, RESPECTI %	VELY DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	
1	Grade	E. bound Arapaho Rd. station 43+20	5	26.4	96.5	103.1
		-				
2	Grade	East bound Arapaho Rd. @ W. bound	5	25.8	91.6	97.9
		entrance		1		
3	Grade	East bound Arapaho Rd. station 44+60	5	26.8	95.7	102.2
4	Grade	East bound Arapaho Rd. station 45+95	5	28.3	92.1	98.4
5	Grade	East bound Arapaho Rd. station 47+30	5	27.5	93.6	100.0
AUGE I.D.:	10903	STD. DENSITY COUNT:	2353	STD M	OISTURE COUNT:	602

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Juny L. Jop por TERRA-MARJINC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:08/31/98TMI REPORT NO.:DC98-050-47

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

S	PECIFICATIC	NS	-			TEST DATA	
	ent Compaction:		-		Date Tested:	08/27/98	
Moist	ure Content (%):	: Opt +			Technician:	M. Kasheem	
		MA	TERIAL REFERENC	E CURVE	DATA		
CURVE	TEST					OPTIMUM	MAX. DRY
NO.	METHOD		MATERIAL DESCRIF	PTION		MOISTURE (%)	DENSITY (pcf
6	D698	Lime Treated Y	ellow & Gray Clay With	Limestone	Fragments	21.0	102.5
					3		
			IN-PLACE TEST	RESULTS	I		
		DENSITY AND M	DISTURE TESTS ARE PER			VELY	
TEST	ELEVATION			REF.	%	DRY	%
NO.	OR LIFT		LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	East bound Ara	paho Rd. @ 51+65	6	24.5	101.2	98.7
2	Grade	1	paho Rd. @ 50+30	6	22.9	101.7	99.2
3			. –	1			
3	Grade	East bound Ara	paho Rd. @ 48+85	6	22.0	106.1	103.5
		}					
GAUGE I.D.:	10903		STD. DENSITY COUNT	: 2366	STD 14	OISTURE COUNT:	612
		DICATES RETEST.	STD. DENSILT COUNT	. 2300	51 D. M	USTORE COUNT:	012
			CT SPECIFICATIONS				

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

m L. 750, PE TERRA-MAR / NC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:08/31/98TMI REPORT NO.:DC98-050-50

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

	ECIFICATIO				TEST DATA					
	nt Compaction:			Date Tested: 08/28/98						
Moistu	ure Content (%):		Technician: M. Kasheem							
		MATERIAL REFERENC	E CURVE	CURVE DATA						
CURVE NO.	TEST METHOD	MATERIAL DESCRIF	TION		OPTIMUM MOISTURE (%)	MAX, DRY DENSITY (pc				
5	D698	Lime Treated Brown C	lay		25.7	93.6				
6	D698	Lime Treated Yellow 8	Tan Clay		21.0	102.5				
		IN-PLACE TEST	RESULTS	3						
		DENSITY AND MOISTURE TESTS ARE PER			VELY					
TEST	ELEVATION		REF.	%	DRY	%				
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY				
1	Grade	Arapaho Rd. West bound @ 51+75	6	21.9	104.6	102.0				
2	Grade	Arapaho Rd. West bound @ 50+40	6	23.7	100.2	97.8				
3	Grade	Arapaho Rd. West bound @ 49+00	6	23.8	102.0	99.5				
4	Grade	Arapaho Rd. West bound @ 47+65	6	21.5	99.5	97.1				
5	Grade	Arapaho Rd. West bound @ 46+25	5	27.3	93.4	99.8				
6	Grade	Arapaho Rd. West bound @ 44+60	5	26.3	9 4.1	100.5				
[
GAUGE I.D.:	10903	STD. DENSITY COUNT	2368	STD. M	OISTURE COUNT:	59 <u>1</u>				

• INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:08/31/98TMI REPORT NO.:DC98-050-52

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

	ECIFICATIO				TEST DATA	
	nt Compaction:			Date Tested:	08/28/98	
Moistu	re Content (%):			Technician:	M. Kasheem	
CURVE	TEST				OPTIMUM	MAX. DRY
NO.	METHOD	MATERIAL DESC			MOISTURE (%)	DENSITY (pc
6	D698	Tan & Gray Lime Ti	reated Clay		21.0	102.5
5	D698	Lime Treated Brown	n Clay		25.7	93.6
		IN-PLACE TES				
		DENSITY AND MOISTURE TESTS ARE PE			VELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	Quorum Dr. @ station 5+50	6	22.0	98.5	96.1
2	Grade	Quorum Dr. @ station 3+50	5	27.6	92.4	98.7
_						
a a a a a a a a a a a a a a a a a a a						
GAUGE LD.:	10903	STD. DENSITY COU	NT: 2368	STD, M	OISTURE COUNT:	591

Jerry L. For PE TERRA-MARYING.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW

TERRA-MAR

a di Spini

11050 Ables Ln., Dallas, Texas 75229 phone:(972)488-8800 fax:(972)488-8080

Report of Moisture-Density Relationship

Client Project TMI Project No. TMI Report No. Report Date		load		vement	S				R	epor	t Dis	trib	ution	Tov Tov	Bell Constructi vn of Addison - vn of Addison - tt-Zollars, Inc	James Pierce Dave Wilde	e, P.E.
Material Origin: Sample Location Material Descrip Material Use:	n: East	Trea	ated Y		nd Lig		Clay v	w/WLS	5F & G	iravel		in fin fan i	6	נייין פ ר	Sampled By: Sample Date: Fested By:	M. Kashen 08/24/98 Jason Alle	
		Dry Densky (pcf)	87.0	a.o	al Pr	DD=10		20 plisture C	ontent (i			20	% Satura (G9=2.86				
Maximum Dry D Optimum Moist Test Method(s): Rammer Descrip	ture Percen	M De	21 9 98-A,	.5 pcf % D4318	-B, D1	Pi Pi	quid Li astic L asticity	imit: / Index		36 26 10 on Pr	oced	dure:	U	'assi ISCS Ioist	5:	20.6 %	
Remarks:															1		

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GEOTLCHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW

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11050 Ables Ln., Dallas, Texas 75229 phone: (972)488-8800 fax: (972)488-8080

Report of Moisture-Density Relationship

Client Project TMI Project No. TMI Report No. Report Date		ad Impro						Town of Addison - Huitt-Zollars, Inc	James Pierce, P.E. Dave Wilde - Kenneth Roberts, P.E.
Material Origin: Sample Locatio Material Descrip Material Use:		Treated E	Brown Clay	station 45+00				Sampled By: Sample Date: Tested By:	M. Kashem 08/24/98 Jason Allen
		97.0 - (1)2))) (1)2))) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)) (1)2)		DD-93.8prf			100% Sabira (Ger 2.85	rlion)	
Maximum Dry E Optimum Moist Test Method(s): Rammer Descrip Remarks:	are Percent	25.3 D698-A,	5 pcf	Liquid Plastic Plastic	Limit: Limit: ity Index:	non-pla non-pla non-pla	astic P astic U astic		49.6 %

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction		TRIBUTION:		
PROJECT:	Arapaho Road Improveme	ents		uction - Doug Teter	
REPORT DATE:	8/28/98			Inc. Kenneth Roberts, P.E.	
TMI REPORT #:	DC98-050-034		'Town of Addis	on - James Pierce, P.E.	
			Town of Addis	on - Dave Wilde	
SPECI	FICATIONS			PROJECT	DATA
Strength (psi):	4000	_		Placement Date:	7/29/98
Slump (in.):	4			Sampled By:	E.M.
Air Content (%):	na			Weather:	Sunny & hot
Concrete Temp (°F):	95	_		Supplier/Mix:	Lattimore #42
		FIELD DA	TA SET #1		
Ticket #:	653515	Time Batched:	01:25	Time Sampled:	2:15
Slump (in.):	4.00	Air Content:	na	Unit Weight (pcf):	na
Conc. Temp. (°F):	97 A	mbient Temp. (°F):	101	Yardage (c.y.):	8.5
Placement Location:	Retaining wall - Northside	e, second span			
Remarks:					
		FIELD DA	TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	A·	mbient Temp. (°F):		Yardage (c.y.):	
Placement Location:					
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS										
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
	ARI072901	8/5/98	7	88810	28.27	3140	U				
1	ARI072902	8/26/98	28	130120	28.27	4600	U				
	ARI072903	8/26/98	28	129590	28.27	4580	U				
	ARI072904	DISCARD									

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Juny L. Jon P. TERRA-MAR, Inc.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improvemen 8/21/98 DC98-050-27	ts	Huitt-Zollars, E Town of Addise	TRIBUTION: action - Doug Teter nc. Kenneth Roberts, P.E. on - James Pierce, P.E. on - Dave Wilde	
SPECI	FICATIONS			PROJEC	Г ДАТА
Strength (psi):	3600			Placement Date:	7/23/98
Slump (in.):	na			Sampled By:	Client
Air Content (%):	na			Weather:	na
Concrete Temp (°F):	na			Supplier/Mix:	na
		FIELD DA	ATA SET #1		
Ticket #:	na	Time Batched:	па	Time Sampled:	па
Slump (in.):	na	Air Content:	па	Unit Weight (pcf):	па
Conc. Temp. (°F):	na Am	bient Temp. (°F):	па	Yardage (c.y.):	па
Placement Location:	Retaining wall @ Northeast	соглег			
Remarks:					
		FIELD DA	ATA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	Am	bient Temp. (°F):		Yardage (c.y.):	
Placement Location:					
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS										
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
	ARI072301	7/30/98	7	97710	28.27	3460	U				
1	ARI072302	8/20/98	28	112302	28.27	3970	U				
	ARI072303	8/20/98	28	113600	28.27	4020	U				
	ARI072304	DISCARD									

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Serry L. For. 105 TERRA-MAR, Inc.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improven 8/26/98 DC98-050-030	ients	Huitt-Zollars, I Town of Addise	TRIBUTION: uction - Doug Teter nc. Kenneth Roberts, P.E. on - James Pierce, P.E. on - Dave Wilde	
SPECI	FICATIONS			PROJECT	Г ДАТА
Strength (psi):	4000			Placement Date:	7/27/98
Slump (in.):	4	_		Sampled By:	E.M.
Air Content (%):	na			Weather:	Sunny & hot
Concrete Temp (°F):	95			Supplier/Mix:	na
		FIELD DA	TA SET #1		
Ticket #:	653315	Time Batched:	01:38	Time Sampled:	2:35
Slump (in.):	4.00	Air Content:	na	Unit Weight (pcf):	na
Conc. Temp. (°F):	93 A	mbient Temp. (°F):	102	Yardage (c.y.):	
Placement Location:	Retaining wall - 1st span	from 90 degree corn	ег		
Remarks:					
		FIELD DA	TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	A	mbient Temp. (°F):		Yardage (c.y.):	
Placement Location:					

Remarks:

	CONCRETE COMPRESSION TEST RESULTS												
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617												
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes					
	ARI072701	8/3/98	7	99010	28.27	3500	U						
1	AR072702	8/24/98	28	130520	28.27	4620	ע						
	AR072703	8/24/98	28	127190	28.27	4500	U						
	AR072704	DISCARD											

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Lerry L. For Pr TERRA-MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 08/13/98 TMI REPORT NO .: DC98-050-42

DISTRIBUTION:

Ed	Bell Construction - Doug Teter
、 Hu	tt Zollars, Inc Kenneth Roberts, P.E.
	itt Zollars, Inc Kenneth Roberts, P.E. wn of Addison - James Pierce, P.E.
Tov	wn of Addison - Dave Wilde
E.L	. Dalton & Company - Mike Claxton

SPECIFICATIONS 95+ Percent Compaction: Moisture Content (%): op++

TEST DATA 08/11/98 **Date Tested:** M. Kasheem Technician:

CURVE NO.	TEST METHOD	MATERIAL DESCRIPT		OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pcl				
3	D698	Brown & Yellow Brown	Brown & Yellow Brown Sandy Clay						
4	D698	Dark brown clay with so	Dark brown clay with some limestone fragments						
		IN-PLACE TEST		-					
TEST	ELEVATION	DENSITY AND MOISTURE TESTS ARE PER A	STM D2922, REF.	D3017, RESPECTI %	DRY	%			
NO.	OR LIFT	LOCATION	CURVE		DENSITY	DENSITY			
1	Grade	36" Storm sewer line C-2, station 14+2	4	26.2	91.3	98.3			
2	Grade	39" Storm sewer line C-3, station 13+8	4	29.0	91.9	98.9			
3	Grade	18" lateral at C-12	4	27.5	95.3	102.6			
4	Grade	18" lateral at C-12	4	26.7	95,5	102.8			
5	2' B.G.	Retaining wall at east end	3	18,9	107.3	98.1			
6	4' B.G.	Retaining wall at middle	3	1 8 .5	107.6	98.4			
7	4' B.G.	Retaining wall at west end	3	17.7	109.5	100.1			
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2317	STD, M		589			

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS

REMARKS:

Jerry L. For the TERRA-MARY, INC.

TERRA-MAR, INC. GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

ALLAS FORTWORTH HOOSTON LONGVIEW LOBBOOK AUSTI

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:08/20/98TMI REPORT NO.:DC98-050-43

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

Perce	PECIFICATIO ent Compaction: ure Content (%):	95+			Date Tested: Technician:	TEST DATA 08/19/98 M. Kasheem	
		MA	FERIAL REFEREN	NCE CURVE	DATA		
CURVE NO,	TEST METHOD		MATERIAL DESC	RIPTION		OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (po
3	D698		Brown & Yellow Bro	own Sandy Cla	y	16.9	109.4
4	D698		Dark brown clay wil	th some limesto	one fragments	25.0	92.9
			IN-PLACE TE				
		DENSITY AND MO	DISTURE TESTS ARE PI				
TEST NO.	OR LIFT	1	OCATION	REF. CURVE	% MOISTURE	DRY DENSITY	% DENSITY
			·····				
1	Grade	18" storm drain,	lateral C-23	4	27.0	91.8	98.8
2	Grade	18" storm drain,	lateral C-22	4	26.7	90.9	97.8
3	Grade	18" stor m drain,	lateral C-20	4	26.5	91.6	98.6
AUGE I.D.:	10903	[STD. DENSITY COL	JNT: 2405	STD M	OISTURE COUNT:	581

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Jerry L. For Por TERRA-MAR JAC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction
PROJECT:	Arapaho Road Improvements
REPORT DATE:	08/14/98
TMI REPORT #:	DC98-050-025

REPORT DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Time left lab:	Arrived at s	ite:	Left site:	Arrived	at lab:
SPECI	IFICATIONS			PROJECT	DATA
Strength (psi):	3600			Placement Date:	07/16/98
Slump (in.):	5			Sampled By:	E.M.
Air Content (%):	na			Weather:	Sunny & Hot
Concrete Temp (°F):	95			Supplier/Mix:	Lattimore 42
		FIELD DAT	A SET #1		
Ticket #:	55338	Time Batched:	01:04	Time Sampled:	1:55
Slump (in.):	3.50	Air Content:	na	Unit Weight (pcf):	na
Conc. Temp. (°F):	99*	Ambient Temp. (°F):	100	Yardage (c.y.):	20 / 40
Placement Location:	Footing for retaining wa	11			
Remarks:	*Temperature exceeds s				
		FIELD DAT	'A SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	······································	Ambient Temp. (°F):		Yardage (c.y.):	
Placement Location:		_			
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS												
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617												
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes					
	ARI071601	07/23/98	7	95340	28.27	3370	U						
1	ARI071602	08/13/98	28	111770	28.27	3950	U						
	ARI071603	08/13/98	28	109590	28.27	3880	ប						
	ARI071604	DISCARD											
]							

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28:27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Lerry L. Fox, Fo TERRA-MAR, Inc.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction	F	REPORT DIS	STRIBUTION:	
PROJECT:	Arapaho Road Improvem	ients E	Ed Bell Const	ruction - Doug Teter	
REPORT DATE:	8/17/98	H	luitt-Zollars,	Inc. Kenneth Roberts, P.E.	
TMI REPORT #:	DC98-050-39	Т	own of Addia	son - James Pierce, P.E.	
		Т	own of Addi	son - Dave Wilde	
SPEC	IFICATIONS			PROJECI	Г ДАТА
Strength (psi):	4000			Placement Date:	8/5/98
Slump (in.):	4			Sampled By:	E.M.
Air Content (%):	na			Weather:	Cloudy & warm
Concrete Temp (°F):	95	_		Supplier/Mix:	Lattimore #42
		FIELD DAT	A SET #1		
Ticket #:	7056035	Time Batched:	01:34	Time Sampled:	2:25
Slump (in.):	3.50	Air Content:	na	Unit Weight (pcf):	na
Conc. Temp. (°F):	94 A	mbient Temp. (°F):	91	Yardage (c.y.):	10
Placement Location:	Retaining wall - East end	!			

	FIELD DATA	A SET #2	
Ticket #:	Time Batched:	Time Sampled:	
Slump (in.):	Air Content:	Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):	
Placement Location:			
Remarks:			

			CONC	RETE COMPRE	SSION TEST R	ESULTS						
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617											
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes				
1	ARI080501 ARI080502 ARI080503 ARI080504	8/12/98 9/2/98 9/2/98 HOLD	7 28 28	115150	28.27	4070	U					

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

Remarks:

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Juny L. For ro

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:08/05/98TMI REPORT NO.:DC98-050-37

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

	nt Compaction: Ire Content (%):			Date Tested: Technician:	08/03/98 E. Mulate			
		MATERIAL REFERENCE		DATA				
CURVE NO.	TEST METHOD	MATERIAL DESCRIPT	TION		OPTIMUM MOISTURE (%)	MAX, DRY DENSITY (pc		
1	D698	Dark & Gray Clay with	Dark & Gray Clay with Gravel					
4	D698	Dark Brown and Light B	Dark Brown and Light Brown Clay w/LSF					
		IN-PLACE TEST DENSITY AND MOISTURE TESTS ARE PER A			VELY			
TEST	ELEVATION		REF.	%	DRY	%		
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY		
		Backfill at Retaining Wall.						
1	Grade	at 90 degrees bend of vertical wall	4	25.5	90.3	97.5		
2	Grade	25' South of Bend	1	18.5	104.7	98.6		
		STD. DENSITY COUNT:	2644		OISTURE COUNT:	716		

REMARKS:

Aury J. For PE TERRA-MARYINC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:08/05/98TMI REPORT NO.:DC98-050-38

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

					E.L. Dalton &	Company - Mike	Claxton
Perce	PECIFICATIO	95+			Date Tested: Technician:	TEST DATA 08/04/98 M. Kasheem	
1110100	wf		ERIAL REFERENCE				
CURVE	TEST					OPTIMUM	MAX. DRY
NO.	METHOD		MATERIAL DESCRIPT	TION		MOISTURE (%)	DENSITY (pc
2	D698		Light Gray Clay w/LSF			20.7	102.8
			IN-PLACE TEST				
		DENSITY AND MOI	STURE TESTS ARE PER A			VELY	
TEST	ELEVATION	[REF.	%	DRY	%
NO.	ORLIFT	LC	CATION	CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	39" Storm Sewer	Line C-3 at Stn. 13+	2	21.7	9 9.7	97.0
2	Grade	39" Storm Sewer	, Line C-3 at Stn. 12+	2	20.8	100.2	97.5
	P						
AUGE I.D.:	10903		STD. DENSITY COUNT:	2375	STD. M		583
AFTER TE	ST NUMBER INI	DICATES RETEST.			r	~	
		MPLY WITH PROJEC	T SPECIFICATIONS				
REMARKS:							

TERRA-MAR JNC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN DALLAS

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: E. L. Dalton & Company, Inc. **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 08/03/98 TMI REPORT NO.: DC98-050-35

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SF	PECIFICATIO	NS				TEST DATA	
Perce	ent Compaction:	95+			Date Tested:	08/03/98	
Moist	ure Content (%):	opt ++	Technician:			M. Kashem	
		MAT	ERIAL REFERENC	E CURVE	DATA		
CURVE	TEST					OPTIMUM	MAX. DRY
N <u>O.</u>	METHOD		MATERIAL DESCRI	PTION		MOISTURE (%)	DENSITY (pcf)
2	D698		Light Gray Calcareous Clay w/LSF			20.7	102.8
4	D698		Dark Brown and Light	Brown Clay	25.0	92.6	
			IN-PLACE TEST	FRESULTS	6		
		DENSITY AND MO	ISTURE TESTS ARE PER	ASTM D2922, I	D3017, RESPECTI	VELY	
TEST	ELEVATION			REF.	%	DRY	%
NO <u>.</u>	OR LIFT	L.		CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	39" Storm Sewe	r Line C-2 and C-3	2	21.0	100.9	98.2
		at Station 12 + 0	5				
2	Grade	39" Storm Sewe	r Line C-2 and C-3	4	25.6	90.6	97.8
		at Station 12 + 9	0				
3	Grade	 39" Storm Sewel	Line C-3	4	25.8	90.1	97.3

STD. DENSITY COUNT: 2374

10903 "R" AFTER TEST NUMBER INDICATES RETEST.

GAUGE I.D.:

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

at Station 12 + 98

TERRA-MAR NC.

STD. MOISTURE COUNT:

589

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction			STRIBUTION:	
PROJECT:	Arapaho Road Improvem	ents	Ed Bell Const	ruction - Doug Teter	
REPORT DATE:	8/5/98		Huitt-Zollars,	Inc. Kenneth Roberts, P.E.	
TMI REPORT #:	DC98-050-034		Town of Addis	son - James Pierce, P.E.	
				son - Dave Wilde	-
SPECI	FICATIONS			PROJECT	DATA
Strength (psi):	4000			Placement Date:	7/29/98
Slump (in.):	4			Sampled By:	E.M.
Air Content (%):	na			Weather:	Sunny & hot
Concrete Temp (°F):	95	_		Supplier/Mix:	Lattimore #42
		FIELD DA	TA SET #1		
Ticket #:	653515	Time Batched:	01:25	Time Sampled:	2:15
Slump (in.):	4.00	Air Content:	na	Unit Weight (pcf):	na
Conc. Temp. (°F):	97 A	mbient Temp. (°F):	101	Yardage (c.y.):	
Placement Location:	Retaining wall - Northsid	le, second span			
Remarks:					
		FIELD DA	TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	A	mbient Temp. (°F):		Yardage (c.y.):	
Placement Location:					
Remarks:					

	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
	ARI072901	8/5/98	7	88810	28.27	3140	U				
1	ARI072902	8/26/98	28								
	ARI072903	8/26/98	28								
	ARI072904	HOLD									

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Sury L. For, P. TERRA-MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:8/12/98TMI REPORT NO.:DC98-050-41

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SP	ECIFICATIO	NS			TEST DATA	
Percei	nt Compaction:	95+		Date Tested:	8/11/98	
Moistu	re Content (%):	<u>op++</u>		Technician:	M. Kasheem	
		MATERIAL REFERENCE	CURVE	DATA		
CURVE	TEST				OPTIMUM	MAX. DRY
NÖ.	METHOD	MATERIAL DESCRIPT	rion		MOISTURE (%)	DENSITY (pc
2	D698	Light gray calcareous clay with limestor	ne fragmen	ts	20.7	102.8
4	D698	Dark brown clay with some limestone fra	agments		25.0	92.6
		IN-PLACE TEST		•		
		DENSITY AND MOISTURE TESTS ARE PER A			IVELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	1st lift	36" Storm sewer line C-2, station 13+9	2	22.4	100.0	97.3
2	Grade	24" Storm sewer line C-1, station 1+76	2	21.2	100.1	97,4
3	Grade	18" Storm sewer lateral B-18, station 3	4	25.3	91.6	98.9
		(15' Right)				
		•				
AUGE I.D.:	10903	STD. DENSITY COUNT:	2408	STD. M	OISTURE COUNT:	600
" AFTER TE	ST NUMBER IN	DICATES RETEST.				
		DICATES RETEST. MPLY WITH PROJECT SPECIFICATIONS				×

TERRA-MARTINC.

DALLAS FORT WORTH HOÙSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:8/12/98TMI REPORT NO.:DC98-050-40

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SP	ECIFICATIO	NS			TEST DATA	
	t Compaction:			Date Tested:	8/6/98	
Moistu	re Content (%):	op++		Technician:	M. Kasheem	
		MATERIAL REFEREN	CE CURVE	DATA		
CURVE NO.	TEST METHOD	MATERIAL DESCR			OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pc
2	D698	Light gray calcareous clay with limes	tone fragmer	nts	20.7	102.8
4	D698	Dark brown clay with some limestone	c brown clay with some limestone fragments			
		IN-PLACE TES	T RESULT	S		
		DENSITY AND MOISTURE TESTS ARE PER	ASTM D2922,	D3017, RESPECT	IVELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	1st lift	24"Storm sewer line C-1, station 0+40	2	21.9	99.6	96. 9
2	Grade	24"Storm sewer line C-1, station 0+38	2	20.9	98.5	95.8
3	1st lift	24"Storm sewer line C-1, station 1+3	7 2	22.0	102.0	99.2
4	Grade	24"Storm sewer line C-1, station 1+40	2	21.2	102.8	100.0
5	1st lift	18"Lateral C-15, @ station 0+52	4	27.0	96.8	104.5
6	Grade	18"Lateral C-15, @ station 0+55	4	26.5	96.5	104.2
						-
AUGE 1.D.:	10903	STD. DENSITY COUN	т: 2360	STD. M	OISTURE COUNT:	605

REMARKS:

TERRA-MARTINC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improveme 8/14/98 DC98-050-36	nts	Ed Bell Constr Huitt-Zollars, Town of Addis	STRIBUTION: ruction - Doug Teter Inc. Kenneth Roberts, P.E. son - James Pierce, P.E. son - Dave Wilde	
SPECI	FICATIONS			PROJECT	DATA
Strength (psi):	4000			Placement Date:	8/3/98
Slump (in.):	4			Sampled By:	E.M.
Air Content (%):	na	_		Weather:	Hot
Concrete Temp (°F):	95			Supplier/Mix:	Lattimore #42
		FIELD DA	TA SET #1		
Ticket #:	53591	Time Batched:	02:00	Time Sampled:	3:10
Slump (in.):	3.00	Air Content:	na	Unit Weight (pcf):	na
Conc. Temp. (°F):	98 Ai	nbient Temp. (°F);	102	Yardage (c.y.):	10
Placement Location:	Retaining wall - Northside) 			
Remarks:					
		FIELD DA	TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):	A1	nbient Temp. (°F):		Yardage (c.y.):	
Placement Location:					
Remarks:				_	

			CONC	RETE COMPRE	SSION TEST R	ESULTS		·····			
	CYLINDERS MOLDED AND CURED PER ASTM C31, TESTED PER ASTM C39, CAPPED PER ASTM C617										
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes			
	ARI080301	8/10/98	7	89110	28.27	3150	U				
1	ARI080302	8/31/98	28								
	ARI080303	8/31/98	28								
	ARI080304	HOLD									

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in, UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Lurry L. For por TERRA-MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: E. L. Dalton & Company, Inc. **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 08/03/98 TMI REPORT NO .: DC98-050-32

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SI	PECIFICATIO	INS			TEST DATA	
Perce	ent Compaction:	95+		Date Tested:	07/28/98	
Moist	ure Content (%):	opt +		Technician:	M. Kashem	
,		MATERIAL REFERENCE	E CURVE	DATA		
CURVE	TEST				OPTIMUM	MAX. DRY
NO,	METHOD	MATERIAL DESCRIP	TION		MOISTURE (%)	DÈNSITY (pcf)
1	ASTM698	Dark Gray & Gray Clay	with Grav	el	16.3	106.2
			,			
	-	IN-PLACE TEST				
		DENSITY AND MOISTURE TESTS ARE PER A	-	3		
TEST NO.	ELEVATION OR LIFT	LOCATION	REF.	% MOISTURE	DRY DENSITY	% DENSITY
NO,	UKLIFI	ECCATION	CORVE	WOISTURE	DENSITY	DENSIT
1	1' B.G.	Embankment on roadway,	1	16.7	104.3	98.2
		station 55+00				
	[
GAUGE I.D.:	5429	STD. DENSITY COUNT:	2673	STD. M	OISTURE COUNT:	730
				,	•	

ST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS **REMARKS:**

Jussi L. For 15 TERRA-MARYINC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:08/03/98TMI REPORT NO.:DC98-050-33

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SF	ECIFICATIO					TEST DATA	
	nt Compaction:	****************			Date Tested:	07/29/98	
Moistu	re Content (%)				Technician:	M. Kashem	
		MATI	ERIAL REFERENCE	CURVE	DATA		
CURVE	TEST					OPTIMUM	MAX, DRY
NO.	METHOD		MATERIAL DESCRIP			MOISTURE (%)	DENSITY (po
2	ASTM698	L	Lime Treated Gray Calcareous Clay w/LSF			20.7	102.8
			IN-PLACE TEST		•		
		DENSITY AND MOU	STURE TESTS ARE PER A				
TEST	ELEVATION			REF.	%	DRY	%
NO.	OR LIFT	LO	CATION	CURVE	MOISTURE	DENSITY	DENSITY
	- ·			_			
1	Grade	24" storm sewer I	ater 21, station 0+18	2	21.2	100.6	97.9
2	Grade	24" storm sewer I	ater 22, station 0+08	2	22.4	100.1	97.4
						~	
AUGE I.D.:	10903	•	STD. DENSITY COUNT:	2341	STD. M	DISTURE COUNT:	600

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

<u>Herra-Mar</u>, INC. <u>For PE</u>

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:08/03/98TMI REPORT NO.:DC98-050-31

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Daiton & Company - Mike Claxton

SPECIFICATION	IS	-	TEST DATA	
Percent Compaction:	95+	Date Tested:	07/28/98	
Moisture Content (%):	opt +	Technician:	M. Kashem	
	B# A 1			

2	METHOD	MATERIAL DESCRIP		OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pcf	
2	ASTM698	Lime Treated Gray Cal	careous Cl	ay w/LSF	20.7	102.8
		IN-PLACE TEST				
		DENSITY AND MOISTURE TESTS ARE PER A			IVELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	42" Storm sew lateral B-21 @ 0+40	2	21.5	100.5	97.8
2	Grade	24" Storm sewer lateral B-20 @ 0+10	2	21.0	101.5	98.7
AUGE I.D.:	10903	STD. DENSITY COUNT:	2404			602

'R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

1154 L. For 45 TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT:	Ed Bell Construction Arapaho Road Improvements	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter
REPORT DATE:	8/3/98	Huitt-Zollars, Inc. Kenneth Roberts, P.E.
TMI REPORT #:	DC98-050-027	Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde
		Town of Addison - Dave while

Time left lab:	Arrived at s	ite:	Left site:	Arrived a	t lab:
SPEC	IFICATIONS			PROJECT I	DATA
Strength (psi):	3600			Placement Date:	7/23/98
Shump (in.):	na			Sampled By:	Client
Air Content (%):	na			Weather:	na
Concrete Temp (°F):	na	_		Supplier/Mix:	na
		FIELD DAT	FA SET #1		
Ticket #:	na	Time Batched:	na	Time Sampled:	i->na
Slump (in.):	na	Air Content:	па	Unit Weight (pcf):	na
Conc. Temp. (°F):	na	Ambient Temp. (°F):	па	Yardage (c.y.):	na
Placement Location:	Retaining wall @ North	east corner	•••		
Remarks:	N				
		FIELD DAT	TA SET #2		
Ticket #:		Time Batched:		Time Sampled:	
Slump (in.):		Air Content:		Unit Weight (pcf):	
Conc. Temp. (°F):		Ambient Temp. (°F):		Yardage (c.y.):	
Placement Location:					
Remarks:					

	CONCRETE COMPRESSION TEST RESULTS							
		YLINDERS M		RED PER ASTM C31				
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	ARI072301 ARI072302 ARI072303 ARI072304	7/30/98 8/20/98 8/20/98 HOLD	7 28 28	97710	28.27	3460	U	
	AIG072304							

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Surry L PG TERRA-MAR, Inc.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT: PROJECT: REPORT DATE: TMI REPORT #:	Ed Bell Construction Arapaho Road Improver 8/4/98 DC98-050-030	nents E H Te	REPORT DISTRIBUTION: Ed Bell Construction - Doug Teter Huitt-Zollars, Inc. Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E.				
		T	own of Addi	son - Dave Wilde			
SPEC	FICATIONS			PROJECT	' DATA		
Strength (psi):	4000			Placement Date:	7/27/98		
Slump (in.):	4			Sampled By:	E.M.		
Air Content (%):	na			Weather:	Sunny & hot		
Concrete Temp (°F):	95			Supplier/Mix:	na		
		FIELD DAT	A SET #1				
Ticket #:	653315	Time Batched:	01:38	Time Sampled:	2:35		
Slump (in.):	4.00	Air Content:	na	Unit Weight (pcf):	-→na		
Conc. Temp. (°F):	93	Ambient Temp. (°F):	102	Yardage (c.y.):	9		
Placement Location: Remarks:	Retaining wall - 1st span	n from 90 degree corner	·····				
2		FIELD DATA	A SET #2				

Ticket #:	 Time Batched:	Time Sampled:	
Slump (in.):	Air Content:	Unit Weight (pcf):	
Conc. Temp. (°F):	Ambient Temp. (°F):	Yardage (c.y.):	
Placement Location:	 		
Remarks:			

		TVI INTERS M		RETE COMPRE RED PER ASTM C31			VED AS	FM C617
et#	Cylinder #	Test Date	Age (Days)					Notes
1	ARI072701 AR072702	8/3/98 8/24/98	7 28	99010	28.27	3500	υ	
*	AR072702 AR072703 AR072704	8/24/98 8/24/98 HOLD	28					
	71107 <i>4</i> 707		••••••••••••••••••••••••••••••••••••••		••••••••••••••••••••••••••••••••••••••			······································

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in, UNLESS NOTED ABOVE.

(2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

Note: This report is for the exclusive use of the Client addressed. This report may not be reproduced except in its entirety, without the written consent of TMI. Results apply only to above tests.

Jurry L too TERRA-MAR, Inc.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

Time left lab:	Arrived at site	Left site	Srawod at la
		Town of Addison - Dave Wilde	
TMI REPORT #:	DC98-050-025	Town of Addison - James Pierce,	P.E.
REPORT DATE:	07/27/98	Huitt-Zollars, Inc. Kenneth Robe	rts, P.E.
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Tet	er
CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:	

Time left lab:	Arrived at site	*	Left site:	Arrived at lab:		
SPECI	FICATIONS			PROJECT	DATA	
Strength (psi):	4000			Placement Date:	07/16/98	
Slump (in.):	5			Sampled By:	E.M.	
Air Content (%):	na			Weather:	Sunny & Hot	
Concrete Temp (°F):	95			Supplier/Mix:	Lattimore 42	
		FIELD DAT	A SET #1			
Ticket #:	55338	Time Batched:	01:04	Time Sampled:	1:55	
Slump (in.):	3,50	Air Content:	па	Unit Weight (pcf):	па	
Conc. Temp. (°F):	99* Ar	nbient Temp. (°F):	100	Yardage (c.y.):	20 / 40	
Placement Location:	Footing for retaining wall					
Remarks:	*Temperature exceeds spe	cifications				
		FIELD DAT	'A SET #2	•		
Ficket #:		Time Batched:		Time Sampled:		
Slump (in.):		Air Content:		Unit Weight (pcf):		
Conc. Temp. (°F):	Ar	nbient Temp. (°F): 🗌		Yardage (c.y.):		
Placement Location:	· · · · · · · · · · · · · · · · · · ·					
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS							
				RED PER ASTM C31				
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
1	ARI071601 ARI071602 ARI071603 ARI071604	07/23/98 08/13/98 08/13/98 HOLD	7 28 28	95340	28.27	3370	U	Concrete was 45 minutes late.

NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in, UNLESS NOTED ABOVE.
 TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.
 TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.
 FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Jerry L. For TERRA-M MAR, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:07/28/98TMI REPORT NO.:DC98-050-29

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SP	ECIFICATIO	DNS			TEST DATA	
	cent Compaction:			Date Tested:		
Moist	ure Content (%):	opt +		Technician:	M. Kashem	
		MATERIAL REFERENC	E CURVE	DATA		
CURVE	TEST				OPTIMUM	MAX. DRY
NO.	METHOD	MATERIAL DESCRIP	TION		MOISTURE (%)	DENSITY (pcf)
1	ASTM698	Dark gray / gray clay wit	th limestone	treated gravel	16.3	106.2
3	ASTM698	Brown & yellow sandy c	lay		16.9	109.4
		IN-PLACE TEST				
TEST	ELEVATION	DENSITY AND MOISTURE TESTS ARE PER A	REF.	D3017, RESPECTI %	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
				4 ⊊∿		
1	grade	42" Storm sewer lateral B-21 @ 0+40	1	19.0	106.8	100.6
2	grade	18" Storm sewer lateral B-17 @ station	1	19.1	105.4	99.2
		0+00				
3	grade	18" Storm sewer lateral B-17 @ station	1	17.2	102.9	96.9
_	0	0+30				
4	grade	24" Storm sewer lateral B-23 @ station	3	17.9	107.7	98.4
		0+00				
5	grade	24" Storm sewer lateral B-23 @ station	3	18.1	106.1	97.0
		0+40				
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2428	STD. 1	MOISTURE COUNT:	604

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

LISAY L. FOD, PE TERRA-MAR, MC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:7/28/98TMI REPORT NO.:DC98-050-028

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SP	ECIFICATIO	DNS			TEST DATA	
Perc	ent Compaction:	95+		Date Tested:	7/25/98	
Moist	ure Content (%):	opt +		Technician:	M. Kashem	
		MATERIAL REFERENCI	E CURVE	DATA		
CURVE	TEST				OPTIMUM	MAX. DRY
NO.	METHOD	MATERIAL DESCRIP	TION		MOISTURE (%)	DENSITY (pcf)
3	ASTM698	Brown & yellow sandy cl	ay		16.9	109.4
	L	IN-PLACE TEST	RESULTS	S		
		DENSITY AND MOISTURE TESTS ARE PER A	STM D2922,	D3017, RESPECT	IVELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
				* *		
				10.0	1000	00.0
1	grade	42" Storm sewer lateral B-21 @ station	3	18.8	107.0	97.8
		0+00 @ existing 66' tie-in.				
GAUGE I.D.:	10903	STD. DENSITY COUNT:	2387	STD. N	IOISTURE COUNT:	590
"R" AFTER TES	ST NUMBER INC	DICATES RETEST.				
 INDICATES F 	AILURE TO CO	MPLY WITH PROJECT SPECIFICATIONS				
REMARKS:						

Juny L. Jon PE TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: E. L. Dalton & Company, Inc. **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 7/24/98 TMI REPORT NO.: DC98-050-026

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

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SPECIFICATI	DNS			TEST DATA	
Percent Compaction	:95+		Date Tested:	7/23/98	
Moisture Content (%)	: opt +		Technician:	M. Kashem	
	MATERIAL	REFERENCE CURVE	DATA		
URVE TEST				OPTIMUM	MAX. DRY
NO. METHOD	MAT	ERIAL DESCRIPTION		MOISTURE (%)	DENSITY (pel
2 ASTM D698	Light gray	/ & gray gravel		20.7	102.8
L	IN-P	LACE TEST RESULTS	<u> </u>		
	DENSITY AND MOISTURE T	ESTS ARE PER ASTM D2922,	D3017, RESPECTI	VELY	
FEST ELEVATION		REF.	%	DRY	%
NO. OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
			* ~		
I l' BFG	Arapaho Road Extension @	41+50 2	20.8	99.4	96.7
				-	

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS

REMARKS:

Jusy L. For to

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:07/13/98TMI REPORT NO.:DC98-050-21

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Y Town of Addison - James Pierce, P.E.

Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

SP	ECIFICATIO	DNS			TEST DATA				
	ent Compaction:			Date Tested:					
	are Content (%):	P		Technician:	M. Kashem				
		MATERIAL REFERENCI	E CURVE	DATA					
CURVE	TEST				OPTIMUM	MAX. DRY			
NO.	METHOD	MATERIAL DESCRIP	TION	~~~~	MOISTURE (%)	DENSITY (pcf)			
2	ASTM D698	Light Gray Calcareous C	lay w/Yel &	Blue WLS	20.7	102.8			
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4			
1	ASTM D698	Gray Clay with Gravel			16.3	106.2			
		IN-PLACE TEST	RESULT	S					
	DENSITY AND MOISTURE TESTS ARE PER ASTM D2922, D3017, RESPECTIVELY								
TEST	ELEVATION		REF.	%	DRY	%			
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY			
1	Grade	24" storm sewer line A-2 and A-1 at station 21+56	1	18.7	103.2	97.2			
		STD. DENSITY COUNT: DICATES RETEST. MPLY WITH PROJECT SPECIFICATIONS	2407	STD, N	MOISTURE COUNT:	571			

Juny L. Fore, E15 TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:E. L. Dalton & Company, Inc.PROJECT:Arapaho Road ImprovementsREPORT DATE:07/13/98TMI REPORT NO.:DC98-050-22

DISTRIBUTION:

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SPECIFICATION	S		TEST DATA
Percent Compaction:	95+	Date Tested:	07/08/98
Moisture Content (%):	Opt to +4	Technician:	M. Kashem

		MATERIAL REFERENCE	CURVE	DATA			
CURVE	TEST		OPTIMUM	MAX. DRY			
NO.	METHOD	MATERIAL DESCRIP	LION		MOISTURE (%)	DENSITY (pci)	
2	ASTM D698	Light Gray Calcareous Cl	ay w/Yel &	Blue WLS	20.7	102.8	
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4	
1	ASTM D698	Gray Clay with Gravel			16.3	106.2	
		IN-PLACE TEST	RESULTS	S			
		DENSITY AND MOISTURE TESTS ARE PER A	STM D2922,	D3017, RESPECT	IVELY		
TEST	ELEVATION		REF.	%	DRY	%	
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY	
1	Grade	24" storm sewer line A-2, station 22+50 .	1	19.6	103.4	97.4	
GAUGE LD.: 10903 STD. DENSITY COUNT: 2359 STD. MOISTURE COUNT: 584 R* AFTER TEST NUMBER INDICATES RETEST. INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:							

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TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: E. L. Dalton & Company, Inc. **PROJECT:** Arapaho Road Improvements 07/13/98 **REPORT DATE:** TMI REPORT NO .: DC98-050-20

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

	ECIFICATIO				TEST DATA			
	ent Compaction:			Date Tested:	07/02/98			
Moist	ure Content (%):	Opt to +4		Technician:	: M. Kashem			
		MATERIAL REFERENCE	CURVE	DATA				
CURVE	TEST				OPTIMUM	MAX. DRY		
NO.	METHOD	MATERIAL DESCRIPT	TION		MOISTURE (%)	DENSITY (p		
2	ASTM D698	Light Gray Calcareous Cl	Light Gray Calcareous Clay w/Yel & Blue WLS 2					
3	ASTM D698	Brown & Yellow Brown S	Sandy Clay		16.9	109.4		
1	ASTM D698	Gray Clay with Gravel						
		IN-PLACE TEST	RESULTS	3				
		DENSITY AND MOISTURE TESTS ARE PER A	STM D2922,	D3017, RESPECTI	VELY			
TEST	ELEVATION		REF.	%	DRY	%		
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY		
1	Grade Grade	24" storm sewer line A-2 and A-1 at station 21+35 24" storm sewer line A-2 and A-1	1	17.8	106.0	99.8 99.1		
2	Grade	at station 21+11	1	19.2	103.2	77.1		
	10903	STD. DENSITY COUNT:	2434		OISTURE COUNT:	607		

REMARKS:

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<u>Jussy L. For, re</u> TERRA-MAR, INC.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: E. L. Dalton & Company, Inc. **PROJECT:** Arapaho Road Improvements 06/24/98 **REPORT DATE:** TMI REPORT NO .: DC98-050-18

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

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SPECIFICATION	IS		TEST DATA
Percent Compaction:	95+	Date Tested:	06/19/98
Moisture Content (%):	Opt to +4	Technician:	M. Kashem

		MATERIAL REFERENCE	CURVE	DATA				
CURVE NO.	TEST METHOD	MATERIAL DESCRIPT	OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pcf				
2	ASTM D698	Light Gray Calcareous Cl	Light Gray Calcareous Clay w/Yel & Blue WLS					
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4		
		IN-PLACE TEST DENSITY AND MOISTURE TESTS ARE PER A			IVELY			
TEST	ELEVATION		REF.	%	DRY	%		
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY		
1 2	I' B.G. 4' B.G.	4E-6, TU electric line, station 0+50 4E-6, TU electric line, station 1+00	2 2	20.7 22.0	101.4 106.1	98.6 103.2		
GAUGE I.D.:	10746	STD. DENSITY COUNT:	2638	STD. 1	MOISTURE COUNT:	496		

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS **REMARKS:**

Jany L. Jon, 45 TERRA-MAR, INC.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: E. L. Dalton & Company, Inc. **PROJECT:** Arapaho Road Improvements 06/24/98 **REPORT DATE:** TMI REPORT NO .: DC98-050-19

ASTM D698

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde E.L. Dalton & Company - Mike Claxton

16.9

109.4

SPECIFICATIONS		S		TEST DATA			
Perc	cent Compaction:	95+	Date Tested:	06/23/98			
Moisture Content (%):		Opt to +4	Opt to +4 Technician:				
	MATERIAL REFERENCE CURVE DATA						
CURVE	TEST			OPTIMUM	MAX. DRY		
NO.	METHOD		MATERIAL DESCRIPTION	MOISTURE (%)	DENSITY (pef)		
2	ASTM D698		Light Gray Calcareous Clay w/Yel & Blue WLS	20.7	102.8		

Brown & Yellow Brown Sandy Clay

IN-PLACE TEST RESULTS DENSITY AND MOISTURE TESTS ARE PER ASTM D2922, D3017, RESPECTIVELY TEST **ELEVATION** REF. % DRY % CURVE MOISTURE NO. **OR LIFT** LOCATION DENSITY DENSITY 6" TU electric line at station 1+58 1 Grade 2 21.5 104.3 101.5 2 6" TU electric line at station 1+85 2 103.7 100.9 4' B.G. 24.4

10746 GAUGE I.D.:

3

STD. DENSITY COUNT:

2621

507 STD. MOISTURE COUNT:

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS **REMARKS:**

Juny L. For. PS TERRA-MOR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

CONCRETE INSPECTION AND COMPRESSION TEST REPORT

CLIENT:	Ed Bell Construction	REPORT DISTRIBUTION:
PROJECT:	Arapaho Road Improvements	Ed Bell Construction - Doug Teter
REPORT DATE:	06/11/98	Huitt-Zollars, Inc. Kenneth Roberts, F
TMI REPORT #:	DC98-050-9	Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

Time left lab:	left lab: Arrived at site: Left site:		e: Arriv	Arrived at lab:		
SPECI	FICATIONS		PROJEC	CT DATA		
Strength (psi):			Placement Date:	05/12/98		
Slump (in.):			Sampled By:	Client		
Air Content (%):			Weather:	na		
Concrete Temp (°F):			Supplier/Mix:			
		FIELD DATA SET #	¥1			
Ticket #:		Time Batched:	Time Sampled:			
Slump (in.):		Air Content:	Unit Weight (pcf):			
Conc. Temp. (°F):	Amb	ient Temp. (°F):				
Placement Location:	Client made cylinders, no loc	ation given				
Remarks:						
		FIELD DATA SET #	¥2			
Ticket #:		Time Batched:	Time Sampled:			
Slump (in.):		Air Content:	Unit Weight (pcf):			
Conc. Temp. (°F):	Amb	ient Temp. (°F);	Yardage (c.y.):			
Placement Location:						
Remarks:						

	CONCRETE COMPRESSION TEST RESULTS							
	C	YLINDERS M	OLDED AND CU	RED PER ASTM C31	I, TESTED PER AS	TM C39, CAPPED	PER 4	ASTM C617
Set #	Cylinder #	Test Date	Age (Days)	Max. Load (lbs)	Area (sq. in.)	Strength (psi)	FC	Notes
	ARE051201	05/19/98	7	147800	28.27	5230	A	
1	ARE051202	06/09/98	28	156130	28.27	5520	С	
	ARE051203	06/09/98	28	152410	28.27	5390	C	
	ARE051204	Discard						
2								

(1) NORMAL CYLINDER SIZE 6" X 12", AREA 28.27 sq. in., UNLESS NOTED ABOVE. (2) TYPE "A" CONE FRACTURE UNLESS INDICATED OTHERWISE IN NOTES.

(3) TEST RESULTS COMPLY WITH PROJECT SPECIFICATIONS UNLESS INDICATED IN NOTES.

(4) FIELD TESTS ARE PER APPLICABLE ASTM STANDARDS: C138, C143, C172, C231

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Kerry La -MAR, Inc.

Roberts, P.E.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements 06/04/98 **REPORT DATE:** DC98-050-16 TMI REPORT NO.:

DISTRIBUTION:

Date Tested:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

TEST DATA

05/29/98

M. Kashem

SPECIFICATIONS

95+ Percent Compaction: Opt to +4 Moisture Content (%):

-4			Technician	1:
MATERIAL	REFERENCE	CURVE	DATA	

CURVE	TEST				OPTIMUM	MAX, DRY
NO.	METHOD	MATERIAL DESCRIP	MOISTURE (%)	DENSITY (pc		
2	ASTM D698	Light Gray Calcareous Cl	ay w/Yel &	Blue WLS	20.7	102.8
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4
	<u> </u>	IN-PLACE TEST	RESULTS	3	Į	
		DENSITY AND MOISTURE TESTS ARE PER A	STM D2922,	D3017, RESPECT	IVELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	8" water line, line B, station 52+96	2	21.4	100,5	97.8
GAUGE I.D.:		STD. DENSITY COUNT: DICATES RETEST.	2571	STD. I	MOISTURE COUNT:	491

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS **REMARKS**:

Lessy L. Fop PE TERRA-MARYINC.

JALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 06/04/98 TMI REPORT NO .: DC98-050-15

TEST

METHOD

DISTRIBUTION:

Date Tested:

Technician:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

> TEST DATA 05/21/98

M. Kashem

OPTIMUM

MOISTURE (%)

MAX. DRY

DENSITY (pcf)

÷.,

SPECIFICATION	S
Percent Compaction:	95+
Moisture Content (%):	Opt to +4

MATERIAL DESCRIPTION

MATERIAL REFERENCE CURVE DATA

2	ASTM D698	Light Gray Calcareous	Clay w/Yel &	Blue WLS	20.7	102.8
3	ASTM D698	Brown & Yellow Brow	vn Sandy Clay		16.9	109.4
		IN-PLACE TES				
	1	DENSITY AND MOISTURE TESTS ARE PE		3		
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	Grade	8" water line, line B, station 52+35	2	21.9	101.1	98.3
AUGE I.D.:	10746	STD. DENSITY COU	NT: 2571	STD. N	OISTURE COUNT:	517

GAUGE I.D.: 10746

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS

REMARKS:

CURVE

NO.

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TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 05/26/98

TMI REPORT NO.:

DISTRIBUTION:

Date Tested:

Technician:

Ed Bell Construction - Doug Teter
Huitt Zollars, Inc Kenneth Roberts, P.E.
Town of Addison - James Pierce, P.E.
Town of Addison - Dave Wilde

TEST DATA 05/20/98

M. Kashem

SPECIFICATIONS 95+ **Percent Compaction:**

DC98-050-14

Moisture Content (%): Opt to +4

MATERIAL REFERENCE CURVE DATA								
CURVE	TEST				OPTIMUM	MAX. DRY		
NO.	METHOD	MATERIAL DESCRIP	MOISTURE (%)	DENSITY (pcf)				
2	ASTM D698	Light Gray Calcareous Cl	ay w/Yel &	Blue WLS	20.7	102.8		
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4		
		IN-PLACE TEST	RESULTS	5				
		DENSITY AND MOISTURE TESTS ARE PER A	STM D2922,	D3017, RESPECT	VELY			
TEST	ELEVATION		REF.	%	DRY	%		
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY		
1	8' B.G.	8" water line, station 52+95	2	21.6	103.7	100.9		
2	Grade	8" water line, station 52+45	2	23.4	102.6	99.8		
3	Grade	8" water line, station 52+00	3	20.0	107.7	98.4		
GAUGE I.D.:	10746	STD. DENSITY COUNT;	2565	STD. 1	MOISTURE COUNT:	498		

"R" AFTER TEST NUMBER INDICATES RETEST.

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* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Lessy L. Fox pr

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 05/18/98 TMI REPORT NO.: DC98-050-11

DISTRIBUTION:

Date Tested:

Technician:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

> TEST DATA 05/14/98

M. Kashem

SPECIFICATIO	NS
Percent Compaction:	95+
Moisture Content (%):	Opt to +4

		MATERIAL REFERENCI	E CURVE	DATA		
CURVE	TEST				OPTIMUM	MAX. DRY
NO.	METHOD	MATERIAL DESCRIP		MOISTURE (%)	DENSITY (pcf)	
2	ASTM D698	Light Gray Calcareous Cl	ay w/Yel &	Blue WLS	20.7	102.8
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4
4	ASTM D698	Drk Brn & Light Brn Cla	y with WLS	F	25.0	92.6
		IN-PLACE TEST	RESULT	S		
		DENSITY AND MOISTURE TESTS ARE PER A	STM D2922,	D3017, RESPECT	VELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1	2nd	8" sanitary line C, station 1+00	4	26.8	90.2	97.4
2	lst	8" sanitary line C, station 2+00	4	27.3	89.3	96.4
3	2nd	8" sanitary line C, station 0+50	4	26.7	90.5	97.7
				, ,		
GAUGE LD.:	10746	STD. DENSITY COUNT:	2677	STD. 1	MOISTURE COUNT:	512

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

<u>Lessy</u> L. Fox per TERRA-MARTINC.

		DALI 11050 Ables L			ISTON AUS			28080	
				-)ensity F				
Client	Ed Bell Constr	-			,				
Project TMI Project No.	Arapaho Road	Improvements			Repo	rt Distributi		Town of Addison	- James Pierce, P.E.
IMI Report No.	DC98-050-12 05/19/98								
				Project In	formation		·····		
Material Origin: Sample Location: Material Descripti Material Use:		r Line at Station wn & Light Bro Material		th Weathere	ed Limeston	e Fragments	5	Sampled By: Sample Date: Tested By:	M. Kashem 05/14/98 Jason Allen
		h	Aoisture-De	ensity Rela	tionship - (Curve No. 4			
	Dvy Decality (pcf)	96.0					Sa tura t a=2.70)	28.0	
		Materi	al Properti	es and Tes	t Informatio	n - Curve t	No. 4		
Maximum Dry De Optimum Moistu	-	92.6 pcf 25 %	L	iquid Limit: lastic Limit: lasticity Ind	67 24		Pa	ssing No. 200: iCS:	89.7 %
Fest Method(s): Rammer Descripti Remarks:		698-A, D4318-I cal		· ·	reparation F	rocedure:	Mo	sist	
					-			-	L. Fox M

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements 05/18/98 **REPORT DATE:** DC98-050-13 **TMI REPORT NO.:**

DISTRIBUTION:

Date Tested:

Technician:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

> TEST DATA 05/15/98

M. Kashem

SPECIFICATIO	NS
Percent Compaction:	95+
Moisture Content (%):	Opt to +4

		MATERIAL REFERENCI	E CURVE	DATA		
CURVE	TEST				OPTIMUM	MAX. DRY
NO.	METHOD	MATERIAL DESCRIP	TION		MOISTURE (%)	DENSITY (pcf)
2	ASTM D698	Light Gray Calcareous Cl	ay w/Yel &	Blue WLS	20.7	102.8
3	ASTM D698	Brown & Yellow Brown	Sandy Clay		16.9	109.4
		IN-PLACE TEST DENSITY AND MOISTURE TESTS ARE PER A			IVELY	
TEST	ELEVATION		REF.	%	DRY	%
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY
1 2 3	Grade Grade Grade	8" sanitary line C, station 2+00 8" sanitary line C, station 1+50 8" sanitary line C, station 1+00	2 2 2	24.7 22.6 20.9	99.4 102.3 99.7	96.7 99.5 97.0
GAUGE I.D.:	10746	STD. DENSITY COUNT:	2642	STD. I	MOISTURE COUNT:	493

"R" AFTER TEST NUMBER INDICATES RETEST.

*** INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS** REMARKS:

Juny I. For, P.F. TERRA-MAR, INC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:05/15/98TMI REPORT NO.:DC98-050-10

DISTRIBUTION:

Date Tested:

Technician:

Ed Bell Construction - Doug Teter
Huitt Zollars, Inc Kenneth Roberts, P.E.
Town of Addison - James Pierce, P.E.
Town of Addison - Dave Wilde

TEST DATA

05/13/98

M. Kashem

SPECIFICATIONS Percent Compaction: 95+ Moisture Content (%): Opt to +4

		MATERIAL REFERENCI	E CURVE	DATA		
CURVE NO.	TEST METHOD	MATERIAL DESCRIP	OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pcf)		
2	ASTM D698	Light Gray Calcareous Cl	ay w/Yel &	Blue WLS	20.7	102.8
3	ASTM D698	Brown & Yeilow Brown	Sandy Clay		16.9	109.4
		IN-PLACE TEST	DECTION			
		DENSITY AND MOISTURE TESTS ARE PER A			IVELY	
TEST NO.	ELEVATION OR LIFT	LOCATION	REF. CURVE	% MOISTURE	DRY DENSITY	% DENSITY
1	2' B.G.	8" water line B, station 50+95	2	21.7	105.3	102.4
2	1' B.G.	8" water line B, station 50+90	2	23.1	104.2	101.4
3	I' B.G.	8" water line B, station 51+10	2	21.0	100.7	98.0
GAUGE I.D.:	10746	STD. DENSITY COUNT:	2591	STD. N	AOISTURE COUNT:	529

"R" AFTER TEST NUMBER INDICATES RETEST.

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

TERRA-MARYNC.

GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT:Ed Bell ConstructionPROJECT:Arapaho Road ImprovementsREPORT DATE:05/14/98TMI REPORT NO.:DC98-050-6

DISTRIBUTION:

Ed Bell Construction - Doug Teter	
Huitt Zollars, Inc Kenneth Roberts, P.E	!
Town of Addison - James Pierce, P.E.	
Town of Addison - Dave Wilde	

SPECIFICATIONS						TEST DATA	
Percent Compaction: 95+			Date Tested: 05/05/98				
Moist	ure Content (%)	Opt to +4		Technician:	: M. Kashem		
		MATERI	AL REFERENCE	CURVE	DATA		
CURVE	TEST					OPTIMUM	MAX. DR
NO.	METHOD		MATERIAL DESCRIPT	ION		MOISTURE (%)	DENSITY (
2	ASTM D698	Light	Gray Calcareous Cla	y w/Yel &	Blue WLS	20.7	102.8
3	ASTM D698		16.9	109.4			
		r	N-PLACE TEST I	TESTILTS			
		DENSITY AND MOISTU				VELY	
TEST	ELEVATION	1		REF.	%	DRY	%
NO.	OR LIFT	LOCAT	ION	CURVE	MOISTURE	DENSITY	DENSITY
1	1' B.G.	8" water line B, station	49+90	2	22.8	102.0	99.2
2	Grade	8" water line B, station		2	21.7	102.9	100.1
3	3.5' B.G.	8" water line B, station	51+35	2	20.8	104.2	101.4
						8	
AUGE I.D.:	10746	S	TD. DENSITY COUNT:	2547	STD. M	OISTURE COUNT:	518

REMARKS:

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Lesry J. For PE TERRA-MARTINC.

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DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT IN-PLACE TESTS BY NUCLEAR METHODS

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **REPORT DATE:** 05/14/98 TMI REPORT NO.: DC98-050-5

DISTRIBUTION:

Ed Bell Construction - Doug Teter
Huitt Zollars, Inc Kenneth Roberts, P.E.
Town of Addison - James Pierce, P.E.
Town of Addison - Dave Wilde

SPECIFICATIONS Percent Compaction: 95+		95+		Date Tested:	*******				
Moist	ure Content (%):			Technician:	M. Kashem				
		MATERIAL REFERENCE	CE CURVE	DATA					
CURVE NO.	TEST METHOD	MATERIAL DESCR		OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (pc				
2	ASTM D698	Light Gray Calcareous	Light Gray Calcareous Clay w/Yel & Blue WLS						
3	ASTM D698	Brown & Yellow Brow	n Sandy Clay		16.9	109.4			
	<u> </u>	IN-PLACE TES	T RESULT	3					
		DENSITY AND MOISTURE TESTS ARE PER	ASTM D2922,	D3017, RESPECTI	VELY				
TEST	ELEVATION		REF.	%	DRY	%			
NO.	OR LIFT	LOCATION	CURVE	MOISTURE	DENSITY	DENSITY			
I	1' B.G.	8" water line B, station 48+50	2	20.8	104.3	101.5			
2	1.5' B.G.	8" water line B, station 47+50	2	23.3	101.3	98.5			
3	Grade	8" water line B, station 46+00	2	22.7	102.3	99.5			
GAUGE I.D.:	10746	STD. DENSITY COUN	r: 2547	STD. N	OISTURE COUNT:	518			
" AFTER TES		ICATES RETEST. MPLY WITH PROJECT SPECIFICATIONS			•				

• INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS REMARKS:

Jussy L. For PE TERRA-MAR, INC.

GEOTECHNICAL, ENVIRON. __INTAL, AND CONSTRUCTION MATERIALS TESTING Dallas Fort Worth Houston Lubbock Longview Austin 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

DAILY ACTIVITY OBSERVATION REPORT

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements PROJECT NO.: DC98-050-7 **REPORT DATE: 05/14/98**

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

On 05/07/98, TMI representative Mohammed Kashem was present at the above referenced project to perform in-place density tests. Upon arrival, TMI was notified that the contractor was not ready for testing. TMI returned to the Dallas Laboratory.

For pe Terra-Mar. Inc.

:

GEOTECHNICAL, ENVIRONMENTAL, AND CONSTRUCTION MATERIALS TESTING Dallas Fort Worth Houston Lubbock Longview Austin 11050 Ables Lane, Dallas, Texas 75229 Phone: 972-488-8800 Fax: 972-488-8080

DAILY ACTIVITY OBSERVATION REPORT

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements **PROJECT NO.:** DC98-050-8 **REPORT DATE: 05/15/98**

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

On 05/12/98, TMI representative Mohammed Kashem was present at the above referenced project to perform concrete inspection and testing. Upon arrival, TMI was notified by the contractor that the concrete was delayed, and was not sure when it would arrive. TMI was instructed to leave cylinder molds at the site and the contractor would make the cylinders when the concrete arrived.

Kerry L. For PET Terra-Mar, Inc.

DALLAS FORT WORTH HOUSTON LONGVIEW LUBBOCK AUSTIN

11050 Ables Lane, Dallas, Texas 75229 Phone:972-488-8800

SOIL MOISTURE -DENSITY TEST REPORT **IN-PLACE TESTS BY NUCLEAR METHODS**

CLIENT: Ed Bell Construction **PROJECT:** Arapaho Road Improvements 05/14/98 **REPORT DATE:** TMI REPORT NO.: DC98-050-4

DISTRIBUTION:

Ed Bell Construction - Doug Teter Huitt Zollars, Inc. - Kenneth Roberts, P.E. Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde

SPECIFICATIONS Percent Compaction: 95+ Moisture Content (%): Opt to +4			Data			TEST DATA 04/30/98 M. Kashem	
		MAT	(ERIAL REFER)	ENCE CURVE :	DATA		
CURVE NO.	TEST METHOD		MATERIAL DE	SCRIPTION		OPTIMUM MOISTURE (%)	MAX. DRY DENSITY (p
2	ASTM D698		Light Gray Calcare	Blue WLS	20.7	102.8	
3	ASTM D698		Brown & Yellow B	rown Sandy Clay		16.9	109.4
		DENSITY AND M	IN-PLACE T	TEST RESULTS		VELY	
TEST	ELEVATION			REF.	%	DRY	%
NO.	OR LIFT	L	OCATION	CURVE	MOISTURE	DENSITY	DENSITY
I 2 3	2' B.G. 1' B.G. Grade	8" water line B, s 8" water line B, s 8" water line B, s	tation 44+00	2 2 2	22.3 21.7 22.6	101.4 102.4 103.5	98.6 99.6 100.7
	10746	-	STD. DENSITY C	OUNT: 2607	STD M	OISTURE COUNT:	516
AUGE I.D.:		DICATES RETEST.	STD. DENSITY C	00INT: 2007	51D. M	UISTUKE COUNT:	510

* INDICATES FAILURE TO COMPLY WITH PROJECT SPECIFICATIONS **REMARKS**:

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Sum I. For. P.

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS

DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW

TERRA-MAR

11050 Ables Ln., Dallas, Texas 75229 phone: (972) 488-8800 fax: (972) 488-8080

Report of Moisture-Density Relationship

Client- Project TMI Project No. TMI Report No. Report Date	bject Arapaho Road Improvements Il Project No. DC98-050 Il Report No. DC98-050-1					Report Distri	bution	Ed Bell Construction - Doug Teter Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde Huitt-Zollars, Inc Kenneth Roberts, P.E.		
				Proj	ect Inform	ation			·····	
Material Origin: Sample Locatior Material Descrip Material Use:	otion: I	Stockpile b Dark Gray On site ba	and Gray Cia	y with Gravel				Sampled By: Sample Date: Tested By:	M. Kashem 04/28/98 Jason Allen	
			N	loisture-Density	Relation	ship - Curve N	o. 1			
		Dey Densky (pcf)	1111.0 			.0 20.0	00%. Se tun (G3#2,7(
				al Properties an						
Maximum Dry D Optimum Moiste Test Method(s):	ure Per	cent:	106.2 pcf 16.3 %			60 20 40		Passing No. 200: JSCS:	58.9 %	
Rammer Descript Remarks:		Aechanica	98-A, D4318-I 91	, UT 140	Prepa	ration Procedur		1oíst		
								INC. <u>Lesry</u>		
The results presente this report, or any pa							tor the e	exclusive use of the	client. Any reproduction of	

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW

TERRA-MAR

11050 Ables In., Dallas, Texas 75229 phone: (972)488-8800 fax: (972)488-8080

Report of Moisture-Density Relationship

Project TMI Project No. TMI Report No.	Ed Bell Constru Arapaho Road I DC98-050 DC98-050-3 05/06/98			Report Distribution	Ed Bell Construction - Doug Teter Town of Addison - James Pierce, P.E. Town of Addison - Dave Wilde Huitt-Zollars, Inc Kenneth Roberts, P.E.		
		W	Project Inform	nation			
Material Origin: Sample Location Material Descript Material Use:		ne at line B, station 4 Yellow Brown Sandy C aterial			Sampled By: Sample Date: Tested By:	M. Kashem 04/30/98 Jason Allen	
		Moisture	-Density Relation	ship - Curve No. 3			
	Dry Densky (pork		Sapet	19.0 19.0			
		Material Prop	erties and Test Inf	ormation - Curve No.	3		
Maximum Dry De Optimum Moistu	•	109.4 pcf 16.9 %	Liquid Limit: Plastic Limit: Plasticity Index:		Passing No. 200: JSCS:	44.0 %	
Test Method(s): Rammer Descripti Remarks:		98-A, D4318-B, D114 al	0		foist		
					INC. Jury		
The results presente this report, or any pa	d in this report per rt therein, is strictly	tain only to the specific i y prohibited without the e	tems tested. This rep express written conse	ort was produced for the entry of TMI.	exclusive use of the	client. Any reproduction of	

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GEOTECHNICAL ENVIRONMENTAL AND MATERIALS ENGINEERS DALLAS FORT WORTH HOUSTON AUSTIN LONGVIEW

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TERRA-MAR

11050 Ables Ln., Dallas, Texas 75229 phone: (972)488-8800 fax: (972)488-8080

Report of Moisture-Density Relationship

Project A TMI Project No. D TMI Report No. D	d Bell Construct rapaho Road im C98-050 C98-050-2 5/06/98			Report Distribution	Town of Addison Town of Addison	- James Pierce, P.E.
			Project Inform	nation		
Material Origin: Sample Location: Material Descriptio Material Use:		Calcareous Clay	n 46+00 to 48+00 with Yellow & Blue We	eathered Limestone	Sampled By: Sample Date: Tested By:	M. Kashem 04/30/98 Jason Allen
		Mois	ture-Density Relation	ship - Curve No. 2		
	Dry Densky (pct)	96.0 18.0	22.0 20.0 Moisture Cont	· ·		
	-			formation - Curve No.		
Maximum Dry Den Optimum Moisture	e Percent:	102.8 pcf 20.7 %	Liquid Limit: Plastic Limit: Plasticity Index:		assing No. 200: ISCS:	53.8 %
Test Method(s): Rammer Description Remarks:		3-A, D4318-B, D		aration Procedure: N	foist	
			ific items tested. This re	port was produced for the e	INC. <u>Juss</u>	June Jacobie Plant Scient. Any reproduction of

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