

INDEX OF SHEETS

NUMBER:	DESCRIPTION:
-	COVER SHEET AND LOCATION MAP
1	SHEET INDEX/GENERAL NOTES
2 & 3	TYPICAL PAVING SECTIONS
4	CONSTRUCTION PLANS & PROFILES
5 - 8	PAVEMENT REMOVAL PLANS
9	COORDINATE LAYOUT PLANS
10 & 11	SIGN PLAN
12	PAVING MARKING PLANS
13 - 15	COUNTUR PLANS
16 & 17	CROSS SECTIONS
18 - 21	CROSS SECTIONS AT DRIVEWAYS
22	DETAIL SHEETS
23 - 31	DRAINAGE AREA MAPS
32	STORM SYSTEM CALCULATIONS
33 - 35	STORM SEWER PLANS
36 - 39	STORM SEWER PROFILES
40 - 43	PHASING PLAN
44	STORM WATER POLLUTION PREVENTION PLAN
45	STORM WATER POLLUTION PREVENTION PLAN DETAIL & NOTES
46 - 51	LANDSCAPE PLANS
52 - 56	IRRIGATION PLANS
57 - 62	ELECTRICAL PLANS
63 - 69	TRAFFIC SIGNAL ELECTRICAL DETAILS
TS-6	

COUNTY OFFICIALS

COUNTY JUDGE
 JAMES FOSTER

COMMISSIONER DISTRICT NO. 1
 MAURINE DICKEY

COMMISSIONER DISTRICT NO. 2
 MIKE CANTRELL

COMMISSIONER DISTRICT NO. 3
 JOHN WILEY PRICE

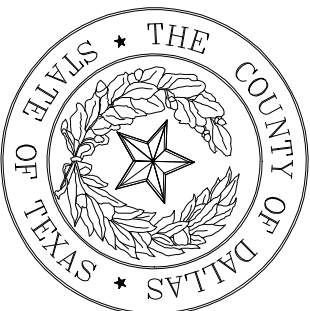
COMMISSIONER DISTRICT NO. 4
 KENNETH A. MAYFIELD

COUNTY OF DALLAS, TEXAS

DEPARTMENT OF PUBLIC WORKS

MCIP ROADWAY IMPROVEMENTS
 TOWN OF ADDISON, TEXAS

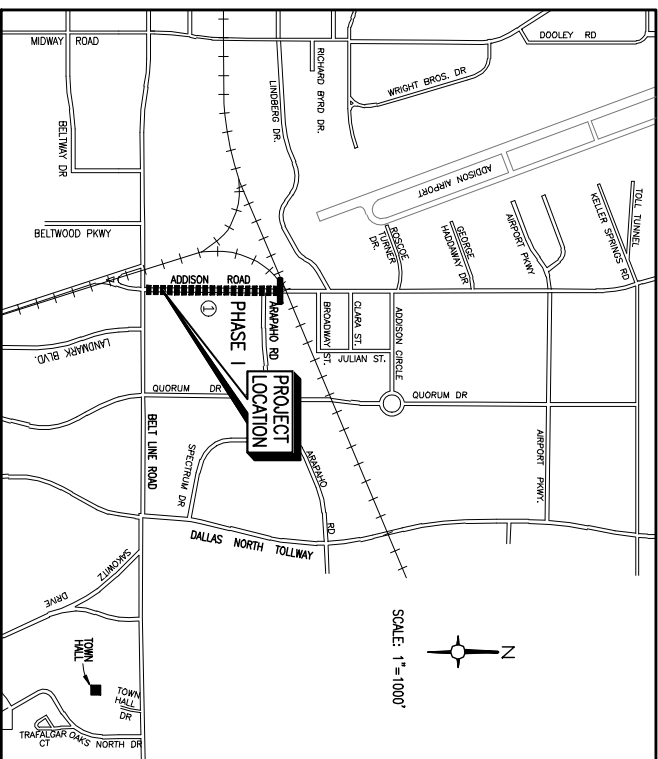
TDA NO. 2002-102
 MCIP PROJECT NO. 10305
 ADDISON RD - FROM BELT LINE RD TO ARAPAHO RD



NO EQUATION
 NO EXCEPTION
 NO RAILROAD

LENGTH OF PROJECT
 1500 FT.

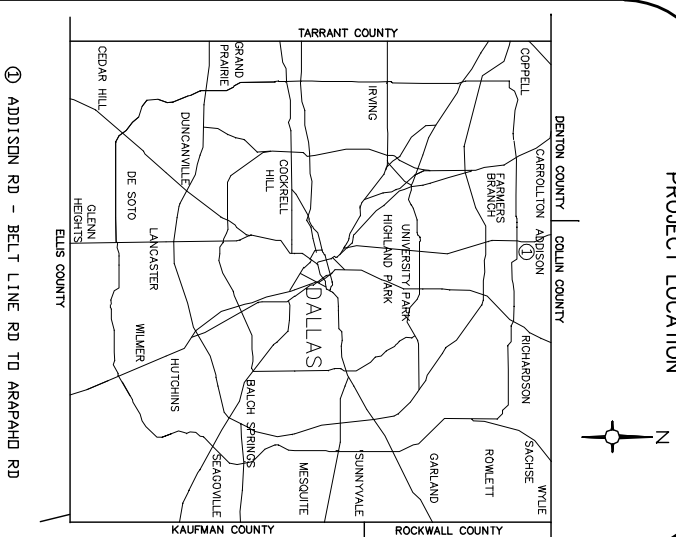
CONSTRUCTION TYPE
 PAVING AND DRAINAGE



THESE DOCUMENTS ARE FOR
 BIDDING, CONSTRUCTION,
 AND PERMIT PURPOSES.
 DATE: 10/31/06

DESIGN SPEED: 40 MPH

PROJECT LOCATION



APPROVALS

TOWN OF ADDISON
 APPROVED: _____ .20
 DIRECTOR OF PUBLIC WORKS

COUNTY OF DALLAS
 RECOMMENDED FOR APPROVAL: _____ .20
 PROJECT MANAGER

ASSIST. DIRECTOR OF PUBLIC WORKS, ENG. & CONST. -
 ALBERTA BLAIR ROBINSON, P. E.

APPROVED: _____ .20
 DIRECTOR OF PUBLIC WORKS - DON HOLZWARTH, P. E.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. The original sealed drawings are the property of the engineer, architects & others, LLC.

BY J.W.B. DATE 05/04/2010

SHEET NO.

SHEET INDEX

SHEET DESCRIPTION

1	COVER SHEET AND LOCATION MAP
2 & 3	SHEET INDEX/GENERAL NOTES
4	STRIP MAPS
5 - 8	TYPICAL PAVING SECTIONS
9	CONSTRUCTION PLANS & PROFILES
10 & 11	PAVEMENT REMOVAL PLANS
12	COORDINATE LAYOUT PLANS
13 - 15	SIGN PLAN
16 & 17	PAVING MARKING PLANS
18 - 21	CONTOUR PLANS
22	CROSS SECTIONS
23 - 31	CROSS SECTIONS AT DRIVEWAYS
32	DETAIL SHEETS
33 - 35	DRAINAGE AREA MAPS
36 - 39	STORM SYSTEM CALCULATIONS
40 - 43	STORM SEWER PLANS
44	STORM SEWER PROFILES
45	PHASING PLAN
46 - 51	STORM WATER POLLUTION PREVENTION PLAN
52 - 56	STORM WATER POLLUTION PREVENTION PLAN DETAIL & NOTES
57 - 62	LANDSCAPE PLANS
63 - 69	IRRIGATION PLANS
TS-6	ELECTRICAL PLANS
	TRAFFIC SIGNAL ELECTRICAL DETAILS

SUMMARY OF ABBREVIATIONS AND DEFINITIONS

GENERAL TOPOGRAPHY & HORIZONTAL/ VERTICAL CONTROL		TREES & BUSHES	
ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
B.C.	BACK OF CURB	B.D.	BOS. D'ARC TREE
B-E	BACK TO BACK	B.T.	BLACK THORN TREE
E	CENTRELINE	C.B.	CHAMBERY TREE
C.K.A.P.	CORRUGATED METAL ARCH PIPE	COR.	CEDAR TREE
C.M.P.	CORRUGATED METAL PIPE	C.E.	CEGAR ELM TREE
C.I.	CAST IRON	C.M.	GRAPE WRTLE TREE
C.O.	CLEANOUT	C.P.	CHINESE PISTACHIO TREE
CONN.	CONNECTION	C.W.	COTTONWOOD TREE
CULV.	CULVERT	C.Y.P.	CYPRESS TREE
D.I.P.	DUCTILE IRON PIPE	H.B.	HACKBERRY TREE
EL.	ELEVATION	HICK.	HICKORY TREE
ELC.	BURIED ELECTRICAL POWER LINE	H.I.T.	HAWTHORN TREE
ENC.	ENCASEMENT	J.P.	JAPONICA TREE
E.P.	EDGE OF PAVEMENT	L.G.	LIGUSTRUM BUSH
ESMT.	ESSEMENT	L.O.	LINE OAK TREE
F-F	FACE TO FACE	L.O.C.	LOCUST TREE
F.H.	FIRE HYDRANT	M.A.G.	MAGNOLIA TREE
F.M.	SANITARY SEWER FORCE MAIN	M.A.P.	MAPLE TREE
F.L.	FLOW LINE	M.S.Q.	MESQUITE TREE
G.L.M.	GAS LINE MARKER	M.M.	MINOSA TREE
G.M.	GAS METER	M.U.	MULBERRY TREE
G.V.	GAS VALVE	N.A.U.	NAUDINA BUSH
GUT.	GUTTER	P.C.	PECAN TREE
H.D.M.L.	HEADMALL	P.E.R.	PESSIMON TREE
I.P.F. OR I.R.F.	IRON PIN (ROD) FOUND	P.H.O.I.	RED TIPPED PHOTINA BUSH
L.L.	LANDSCAPING LIGHT	P.S.T.	CHINESE PISTACHIO TREE
L.P.	LIGHT POLE	R.B.	REDBUD TREE
L.S.	SANITARY SEWAGE LIFT STATION	R.O.	RED OAK TREE
L.S.T.	LANDSCAPING TIMBERS	S.G.	SWEET GUM TREE
M.B.	MALBOX	S.C.	SYCAMORE TREE
M.B.G.F.	METAL BEAM GUARD FENCE	SIC.	WILLOW TREE
M.H.	MANHOLE	W.L.	
P.C.	POINT OF CURVATURE	W. OR W.L.	
		W.V.	

GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, AS OUTLINED IN N.C.T.C.O.G. AND TOWN OF ADDISON SPECIFICATIONS.
2. PROPOSED MAIN LANES - ALL PROPOSED 10-INCH CONCRETE REINFORCEMENT SHALL BE #4 BARS DETORMED ON 18" CENTER EACH WAY. REINFORCED CONCRETE PAVEMENT SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4000 P.S.I. MINIMUM 6.5 SLACK MIX. MAXIMUM W/C 5.5 N.C.T.C.O.G. AGGREGATE 2-3 [ITEM 2.11.(C)(4)] COURSE. MAXIMUM SLUMP SLIP FORM 2 INCHES. SLUMP HAND POURED 4 INCHES.
3. ALL CONNECTIONS OF PROPOSED CONCRETE PAVEMENT TO EXISTING PAVEMENT SHALL INCLUDE A LONGITUDINAL BUTT JOINT WITH #5 OR #6 BAR DOWELS AS THE LOAD TRANSFER DEVICE - SEE DETAIL THIS SET OF PLANS.
4. REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES AND SERVICE LINES. HOWEVER, THE OWNER ASSUMES NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL EXISTING SUBSURFACE UTILITIES OR UTILITY LINES. OR TO SHOW THEM IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES, SERVICE LINES OR THE LIKE, WHICH ARE CROSSED OR EXPOSED BY THE CONSTRUCTION OPERATION.
5. THE CONTRACTOR SHALL FIELD VERIFY DEPTH AND HORIZONTAL ALIGNMENT OF ALL EXISTING UTILITIES (GAS LINES, WATER LINES, COMMUNICATION LINES AND SERVICE LINES) PRIOR TO CONSTRUCTION. CONFLICTS WITH PROPOSED IMPROVEMENTS SHALL BE PROVIDED IN WRITING TO THE TOWN OF ADDISON.
6. THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND SPRINKLER SYSTEMS. ALL DAMAGE CAUSED BY CONSTRUCTION SHALL BE REPAIRED WITHIN 48 HOURS BY AN IRRIGATOR LICENSED IN THE STATE OF TEXAS. ALL COSTS SHALL BE BORNE BY THE CONTRACTOR. SEE LANDSCAPE PLANS FOR PROPOSED IRRIGATION.
7. UTILITY RELOCATION'S AND ADJUSTMENTS - WATER METER AND WATER METER BOXES TO BE RELOCATED OR ADJUSTED SHALL BE REPLACED WITH NEW METER BOXES AND SET AT THE FINISHED GRADE ELEVATION AND WATER SERVICES RECONNECTED. ALL WATER METERS AND METER BOXES IN PROPOSED PAVEMENT AREA SHALL BE RELOCATED IN ADJACENT PARKWAY OR A NON PAVEMENT AREA, PREFERABLY BETWEEN PROPOSED BACK OF CURB AND PROPOSED SIDEWALK. EXISTING METER BOXES REMOVED SHALL BE THE PROPERTY OF THE TOWN. EXISTING WATER VALVE BOXES WITH COVERS SHALL BE REMOVED AND RESET AT THE FINISHED GRADE ELEVATION. ALL EXISTING VALVE STACKS WITH IN THE LIMITS OF THIS PROJECT SHALL BE PROVIDED WITH DEBRIS CAPS. EXISTING STORM SEWER OR SANITARY SEWER MANHOLE FRAME AND COVER TO BE ADJUSTED TO MATCH FINISHED GRADE SHALL USE PRE CAST CONCRETE GRADE RINGS AND NON SHIRNK GROUT. ANY OF THESE ITEMS THAT ARE DAMAGED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED WITH ITEMS OF EQUAL OR SUPERIOR QUALITY AT THE SOLE EXPENSE OF THE CONTRACTOR. ALL WATER SERVICE LINES SHALL BE REPLACED BETWEEN WATER MAIN AND WATER METER. ALL SANITARY SEWER SERVICE LINES SHALL BE REPLACED BETWEEN SEWER MAIN AND CLEANOUT WITH NEW 4 INCH SDP 35 PVC PIPE OR MATCH PIPE SIZE IF LARGER THAN 4 INCHES.
8. THERE SHALL BE AT LEAST 6-INCHES CLEAR DISTANCE FROM THE TOP OF THE ADJUSTED METER BOXES AND THE WATER METER. CONTRACTOR SHALL NOTIFY THE TOWN AND ALL OWNERS WITH METERS TO BE ADJUSTED 48 HOURS IN ADVANCE OF ANY PLANNED CONSTRUCTION. SERVICE SHALL NOT BE DISRUPTED FOR MORE THAN 4 HOURS WITHOUT THE PERMISSION FROM THE CITY ENGINEER. CONTRACTOR SHALL TAKE MEASURES NECESSARY TO RESTORE WATER SERVICE WITHIN THE 4-HOURS.
9. THE CONTRACTOR SHALL GIVE THE TOWN, BUSINESSES AND RESIDENTS AT LEAST 72 HOURS PRIOR NOTICE TO BEGINNING OF CONSTRUCTION AND AT LEAST 48 HOURS FOR ANY ANTICIPATED WATER OR SEWER SERVICE DISRUPTION.
10. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW A MINIMUM OF 14 DAYS PRIOR TO THE POUR.
11. NO SEPARATE PAY ITEM FOR SUB GRADE PREPARATION UNDER DRIVE OR PARKING AREAS AND ALL COST SHALL BE INCLUDED IN THE APPROPRIATE ITEMS OF THE BID SCHEDULE.
12. ALL PAVEMENT REMOVAL AND REPLACEMENT SHALL BE FULL DEPTH SAW CUT ALONG NEAT LINES AS SHOWN IN THE PLANS. PROPOSED CONCRETE PAVEMENT SHALL BE CONSTRUCTED WITH LONGITUDINAL CONSTRUCTION JOINTS AT ALL CONNECTIONS TO EXISTING CONCRETE PAVEMENT. DAMAGED OR SPALLED EDGES WILL BE RECUR FULL LENGTH.
13. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING CONCRETE AND H.M.A.C. PAVEMENT AS REQUIRED FOR CONSTRUCTION OF DRIVES AND PARKING AREAS. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK. ALL COSTS SHALL BE INCLUDED IN THE APPROPRIATE ITEMS IN THE BID SCHEDULE.
14. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY THE CONSTRUCTION TO THE ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE BUT NOT LIMITED TO TRENCH BACK FILL, SIDE SLOPES, FENCES, IRRIGATION SYSTEMS, DRIVEWAYS, PRIVATE YARDS, SIGNS AND ROADWAYS.
15. THE CONTRACTOR SHALL PROTECT ALL TREES, STRUCTURES, SIGNS, MAILBOXES AND OTHER ITEMS THAT ARE NEAR AND/OR ADJACENT TO AREA OF CONSTRUCTION. PRIVATE SIGNS AND MAILBOXES TO BE REMOVED SHALL BE REPLACED OR RELOCATED WITH DIRECTION AND COORDINATION OF THE OWNER AND THE TOWN AND BE WITHIN THE GUIDE LINES OF THE TOWN ORDINANCES. ALL OTHER SIGNS REMOVED DURING CONSTRUCTION SHALL BE TEMPORARLY MOUNTED AND PLACED AT PROPER LOCATIONS TO DIRECT TRAFFIC FLOW IF APPLIES.
16. THE CONTRACTOR SHALL MAINTAIN TWO WAY TRAFFIC DURING ROADWAY CONSTRUCTION AND MAINTAIN ACCESS TO ALL BUSINESSES BY USING EXISTING, PROPOSED OR TEMPORARY H.M.A.C. PAVEMENT. THE CONTRACTOR SHALL POST SIGNS AT DRIVEWAYS ALONG THE CONSTRUCTION SITE TO DIRECT TRAFFIC INTO BUSINESSES. THE SIGNS SHALL BE 2 FT. BY 3 FT. WITH BLUE BACKGROUND AND WHITE LETTERS. LETTERS SHALL HAVE THE NAME OF THE BUSINESS AT THE DRIVEWAY TO BE ACCESSED.
17. CONTRACTOR SHALL PROVIDE PROPER BARRICADES, SIGNS, FLAG MEN AND OTHER TRAFFIC CONTROL DEVICES FOR THIS AREA.
18. CONTRACTOR SHALL STAKE SIDEWALK LAYOUT IN THE FIELD FOR TOWN REVIEW. CONTRACTOR SHALL MODIFY ALIGNMENT OF SIDEWALK AS DIRECTED BY THE TOWN. DETERMINATION WILL BE BASED ON AVOIDING DISRUPTION OF TREE ROOT STRUCTURE OF EXISTING LANDSCAPING.
19. CONTRACTOR SHALL ARRANGE AND PAY FOR SWRT, AIR21, ATMOS GAS COMPANY TO ADJUST EXISTING MANHOLES TO FINISHED GRADE OF ROADWAY.

These plans and related specifications were prepared for construction of this project and are not to be used for any other project without the written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

SHEET INDEX/GENERAL NOTES

PHASE I

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas



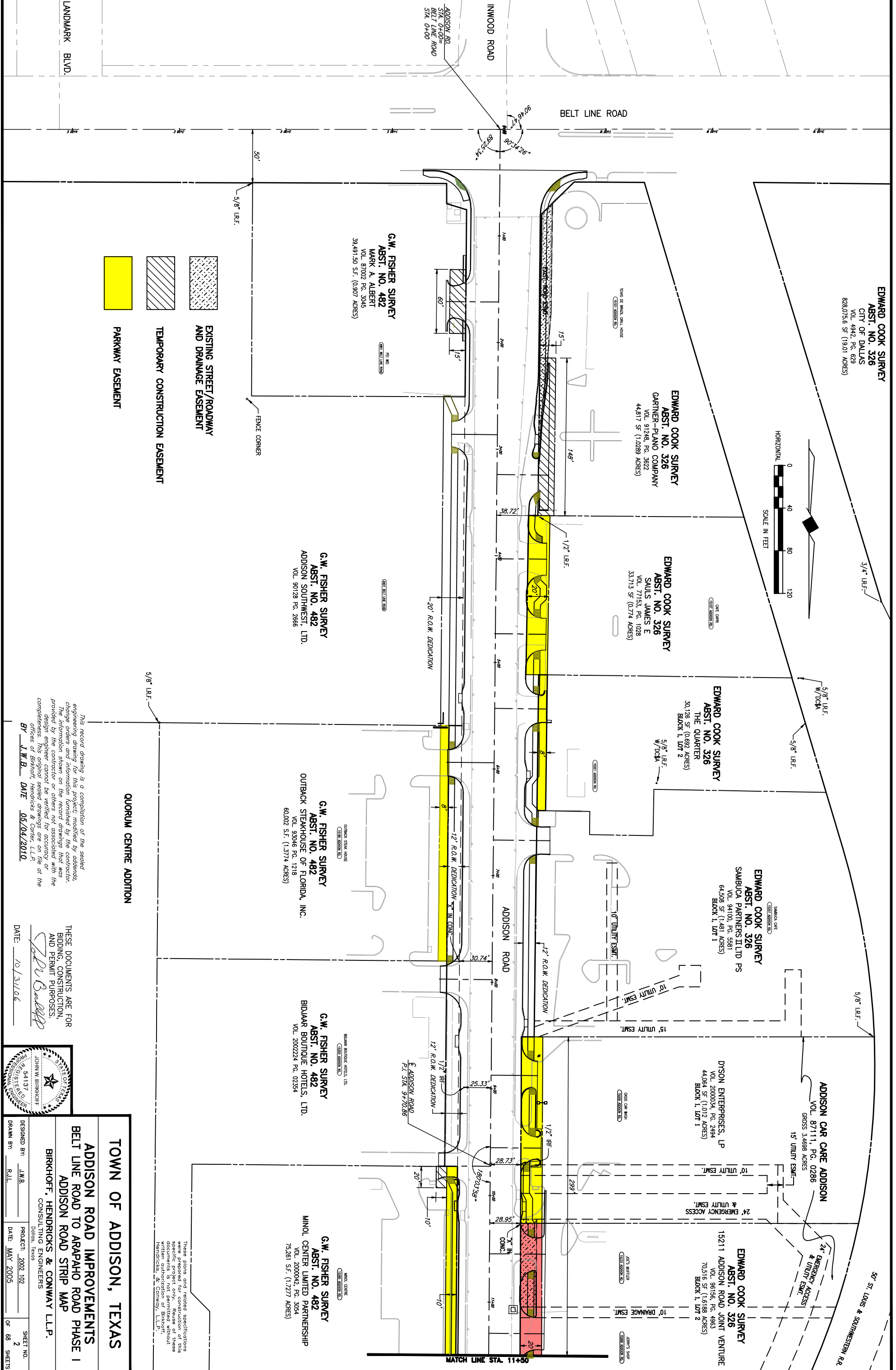
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 10/31/06

DESIGNED BY: J.W.B.	PROJECT: 2002-102	SHEET NO. 1
DRAWN BY: R.L.L.	DATE: SEPTEMBER 2006	OF 88 SHEETS

This record drawing is a completion of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy, or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY: J.W.B. DATE: 09/04/2010



EDWARD COOK SURVEY
 ABST. NO. 326
 CITY OF DALLAS
 VOL. 4942, PG. 629
 828,075.6 SF (19.01 ACRES)

EDWARD COOK SURVEY
 ABST. NO. 326
 GARTNER-PLANO COMPANY
 VOL. 91248, PG. 3622
 44,817 SF (1.0289 ACRES)

EDWARD COOK SURVEY
 ABST. NO. 326
 SAULS JAMES E
 VOL. 77153, PG. 1028
 33,713 SF (0.7774 ACRES)

EDWARD COOK SURVEY
 ABST. NO. 326
 THE QUARTER
 30,126 SF (0.692 ACRES)
 BLOCK 1, LOT 2

EDWARD COOK SURVEY
 ABST. NO. 326
 SAMBUCA PARTNERS II, LTD PS
 VOL. 94100, PG. 5581
 64,508 SF (1.481 ACRES)
 BLOCK 1, LOT 1

DYSON ENTERPRISES, LP
 VOL. 2000034, PG. 2484
 44,094 SF (1.012 ACRES)
 BLOCK 1, LOT 1

EDWARD COOK SURVEY
 ABST. NO. 326
 15211 ADDISON ROAD JOINT VENTURE
 VOL. 96156, PG. 4963
 70,516 SF (1.6188 ACRES)
 BLOCK 1, LOT 2

G.W. FISHER SURVEY
 ABST. NO. 482
 MARK A. ALBERT
 VOL. 87002 PG. 3045
 39,491.50 SF (0.907 ACRES)

G.W. FISHER SURVEY
 ABST. NO. 482
 ADDISON SOUTHWEST, LTD.
 VOL. 90128 PG. 2666

G.W. FISHER SURVEY
 ABST. NO. 482
 OUTBACK STEAKHOUSE OF FLORIDA, INC.
 VOL. 93046 PG. 1218
 60,002 SF (1.3774 ACRES)

G.W. FISHER SURVEY
 ABST. NO. 482
 BIDAAR BOUTIQUE HOTELS, LTD.
 VOL. 2002224 PG. 02354

G.W. FISHER SURVEY
 ABST. NO. 482
 MINOL CENTER LIMITED PARTNERSHIP
 VOL. 2000042, PG. 3054
 75,261 SF (1.7277 ACRES)



QUORUM CENTRE ADDITION

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 ADDISON ROAD STRIP MAP

BIRKHOFF, HENDRICKS & CONWAY LLP.
 CONSULTING ENGINEERS
 Dallas, Texas

THESE DOCUMENTS ARE FOR
 BIDDING, CONSTRUCTION,
 AND PERMIT PURPOSES.
John W. Birkhoff
 DATE: 10/31/06

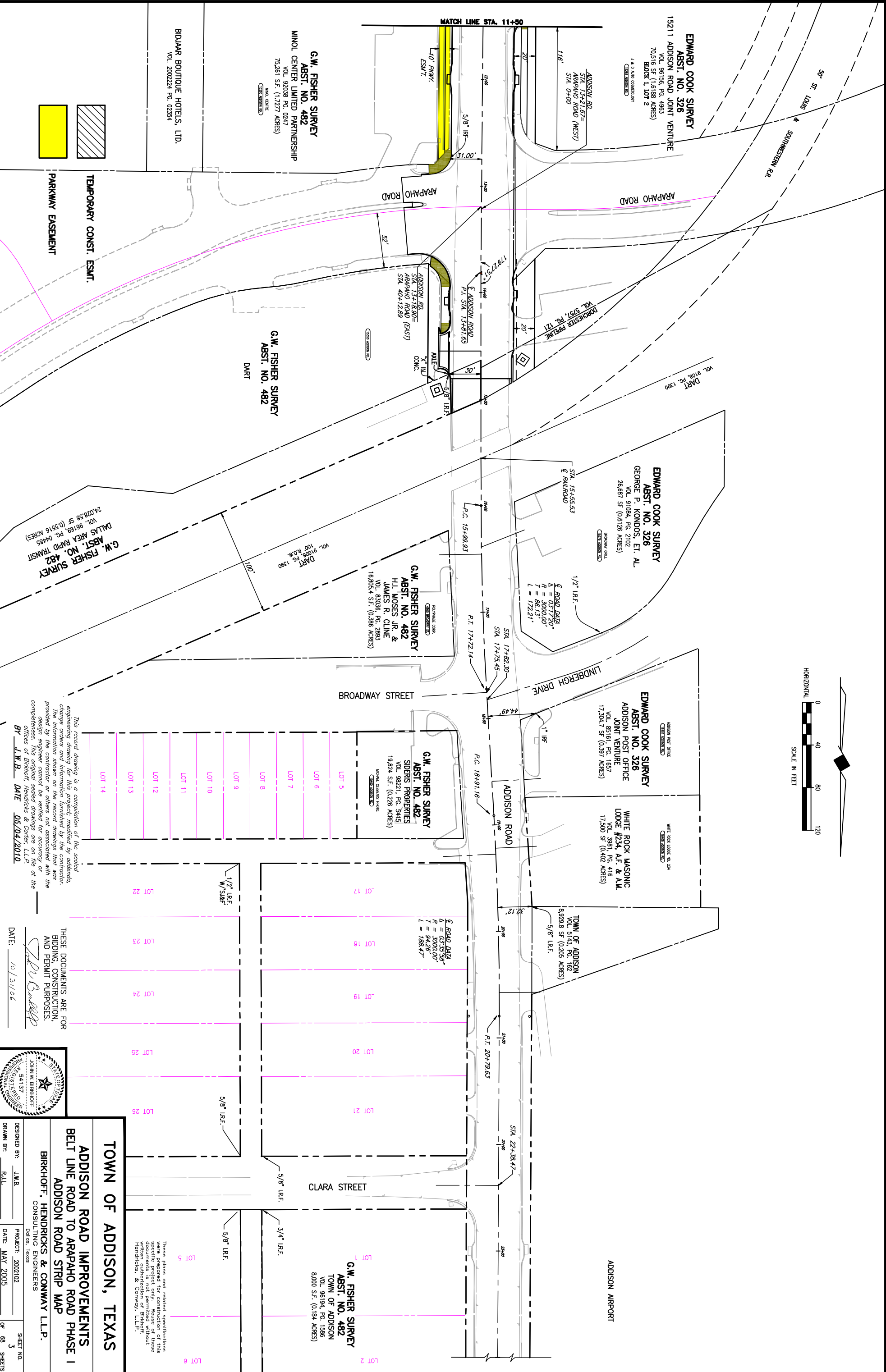


DESIGNED BY: J.W.B.	PROJECT: 2002 102	SHEET NO. 2
DRAWN BY: R.L.L.	DATE: MAY 2005	OF 68 SHEETS

These plans and related specifications were prepared for construction of this project. The engineer and his firm accept no responsibility for any errors or omissions in these documents if not permitted without the written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

This record drawing is a compilation of the sealed engineering drawings of this project, as filed by contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY: J.W.B. DATE: 05/04/2010

MATCH LINE STA. 11+50



This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE I

ADDISON ROAD STRIP MAP

BIRKHOFF, HENDRICKS & CONWAY L.L.P.

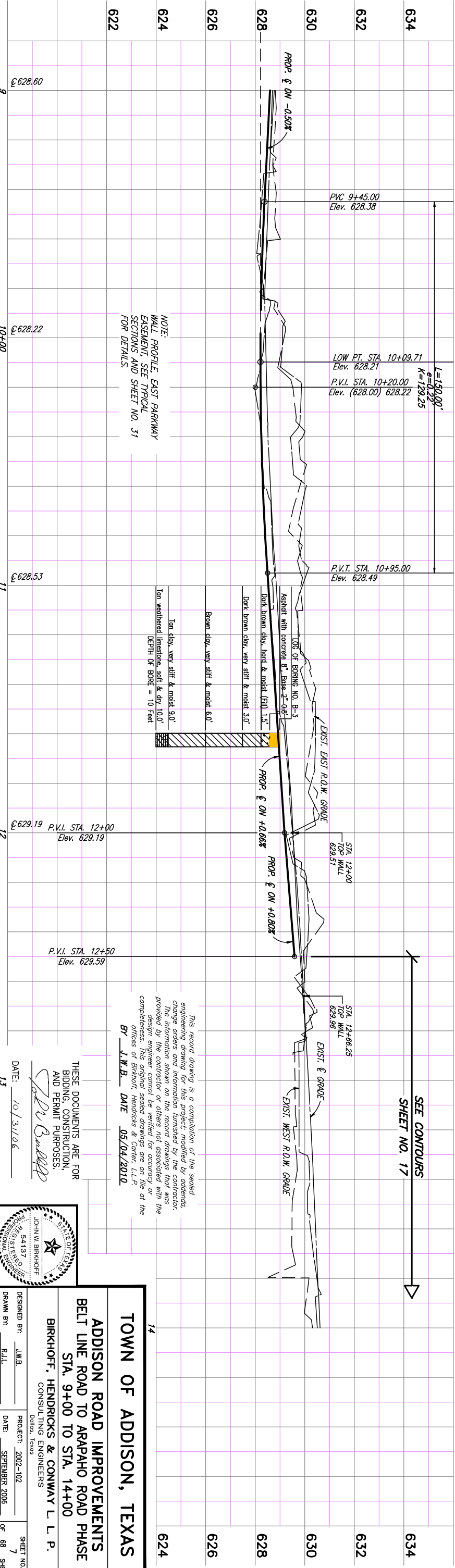
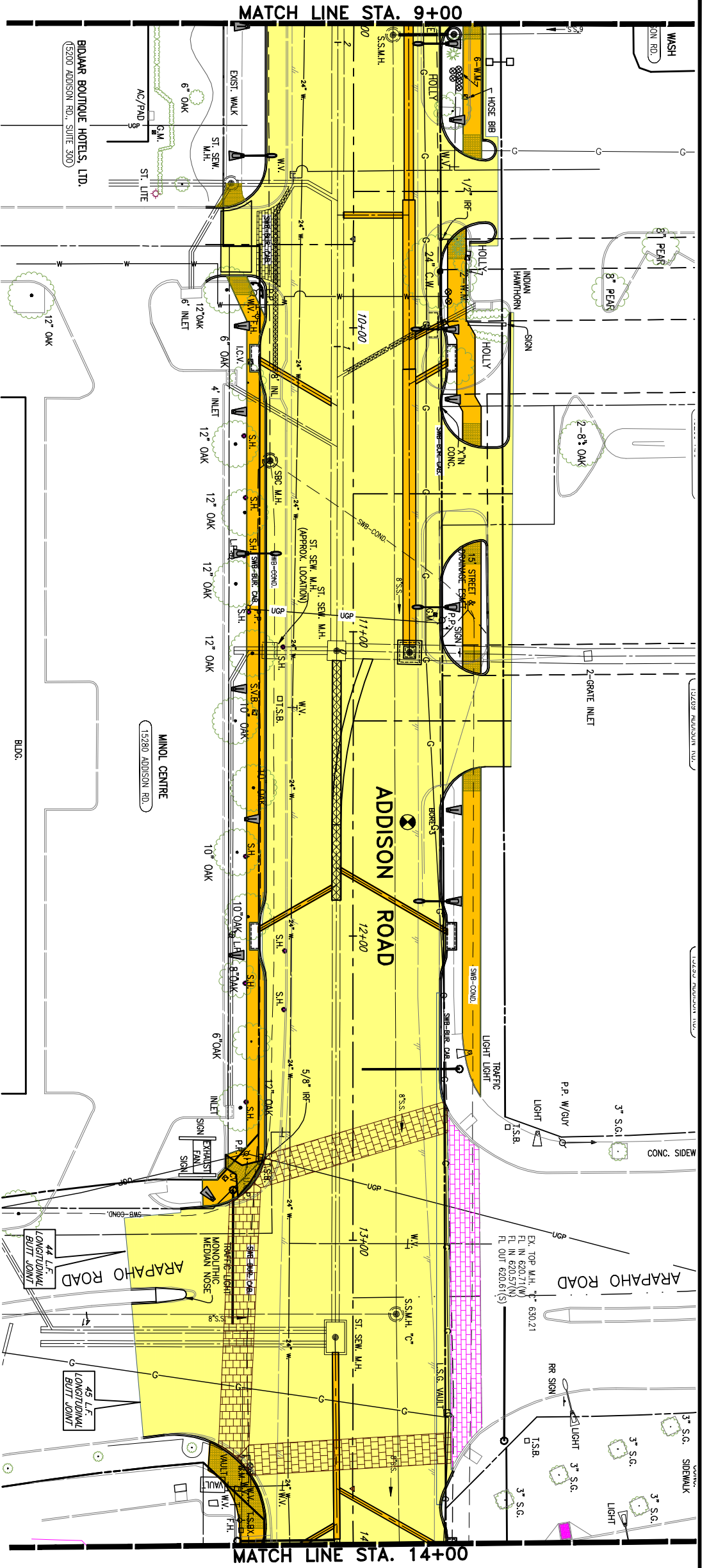
CONSULTING ENGINEERS

Dallas, Texas

DESIGNED BY: J.W.B. PROJECT: 2002102 SHEET NO. 3

DRAWN BY: R.L.L. DATE: MAY 2005 OF 68 SHEETS

These plans and related specifications were prepared by the engineering firm of Birkhoff, Hendricks & Conway, L.L.P. for the specific project only. Reuse or these documents is not permitted without the written authorization of Birkhoff, Hendricks & Conway, L.L.P.

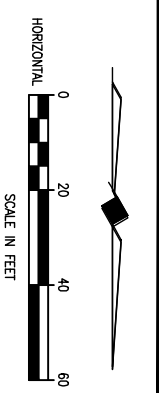


NOTE:
WALL PROFILE, EAST PARKWAY
EASEMENT, SEE TYPICAL
SECTIONS AND SHEET NO. 31
FOR DETAILS.

LOG OF BORING NO. B-3	Asphalt with concrete 8" Base 2'-0"
Dark brown clay, hard & moist (fill) 1.5'	
Dark brown clay, very stiff & moist 3.0'	
Brown clay, very stiff & moist 6.0'	
Tom clay, very stiff & moist 9.0'	
Tom weathered limestone, soft & dry 10.0'	
DEPTH OF BORE = 10 Feet	

This record drawing is a completion of the sealed engineering drawing in this project, prepared by a registered professional engineer in accordance with the information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or the completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY J.W.B. DATE 05/04/2010

SEE CONTOURS
SHEET NO. 17

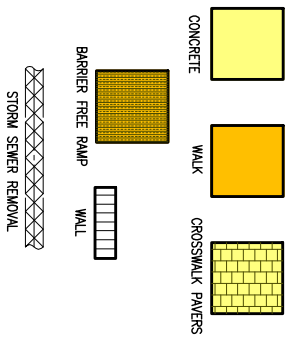


- B.M.#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF WOOD RD. ELEV. 630.59
- T.A.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80
- T.A.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD., & STA. 9+87.52 FEET RT. ELEV. 628.75
- T.A.M. AR-3 "C" CUT AT END OF RETAINING WALL, NORTH OF UNDERBUSH DR., WEST SIDE OF ADDISON RD., & STA. 18+76.45 FEET LT. ELEV. 635.38

NOTE:
CROSSWALK PAVERS SHALL BE ACME CLAY FIRED BRICK PAVERS (ACME BRICK 231 BLEND). PAVES SHALL MEET ASTM C 1272, TYPE R, APPLICATION PS.

FOR SUMMARY OF ABBREVIATIONS
SEE SHEET INDEX/GENERAL NOTES SHEET

These plans and related specifications were prepared for the construction of the project shown on these drawings. The design engineer's written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STA. 9+00 TO STA. 14+00**

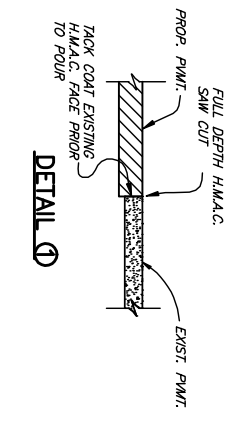
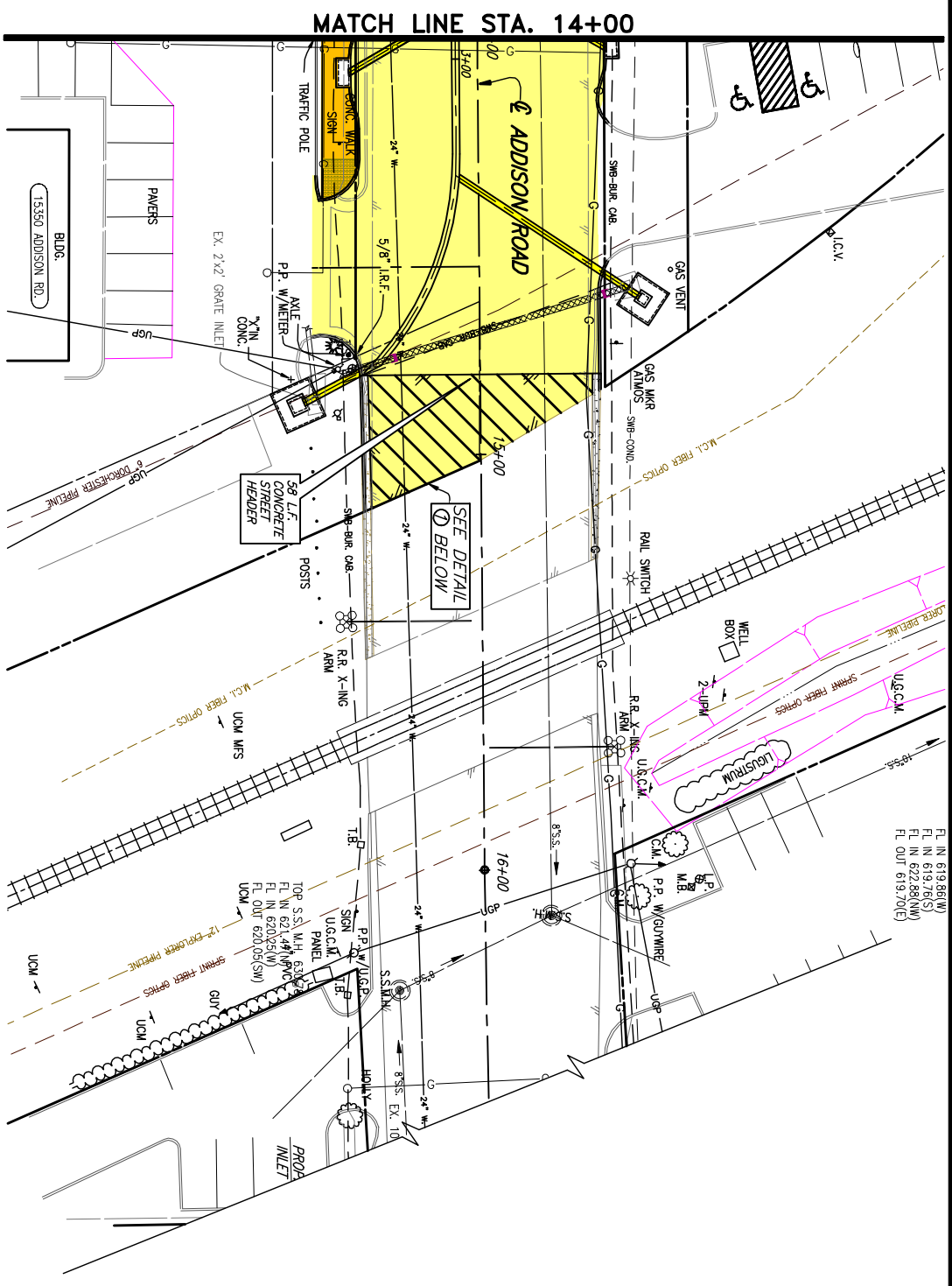
BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: <u>J.W.B.</u>	SHEET NO. <u>7</u>
DRAWN BY: <u>RAJL</u>	OF <u>88</u> SHEETS
PROJECT: <u>2002-102</u>	
DATE: <u>SEPTEMBER 2008</u>	

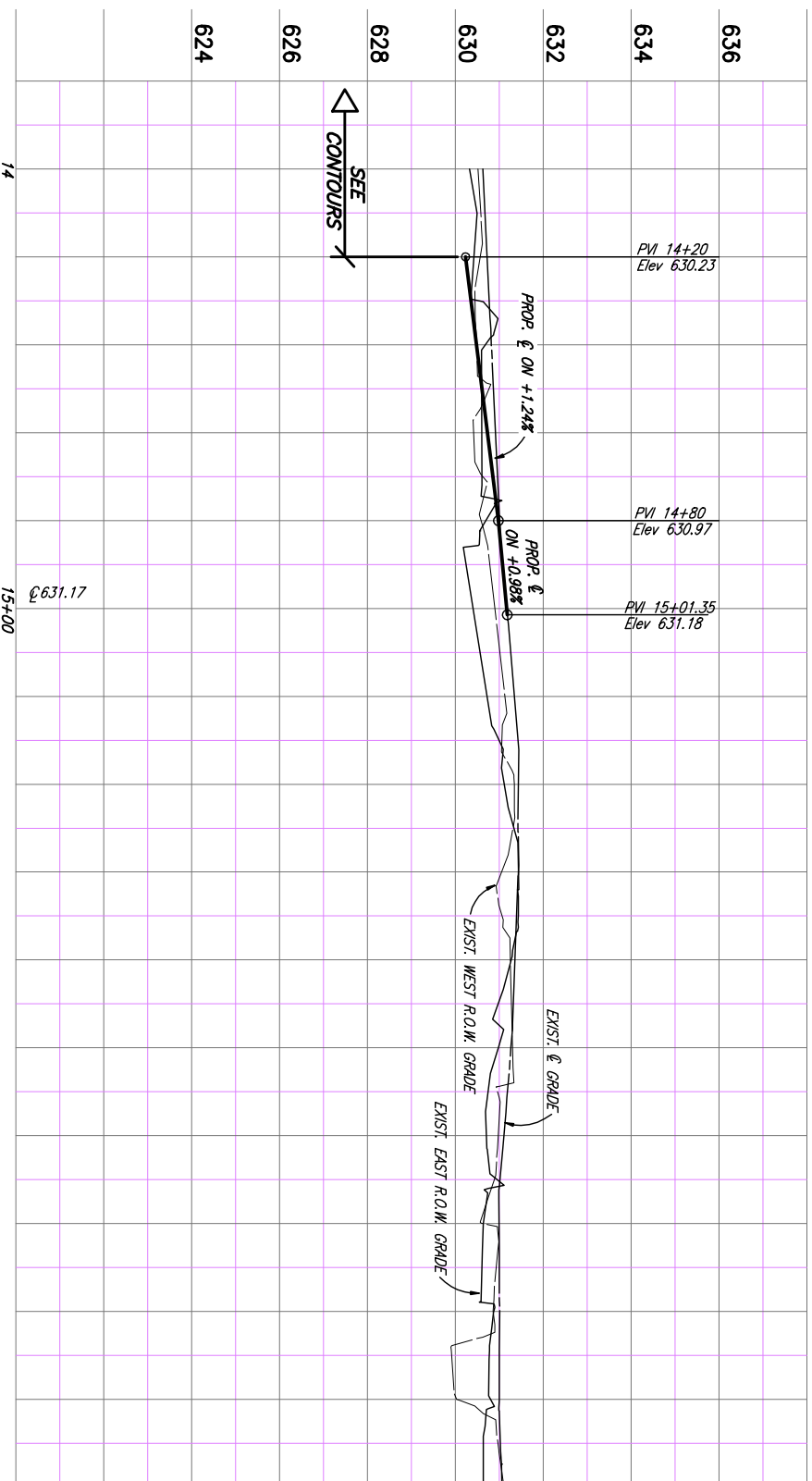
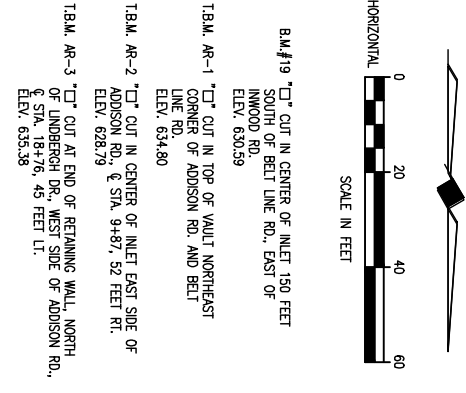
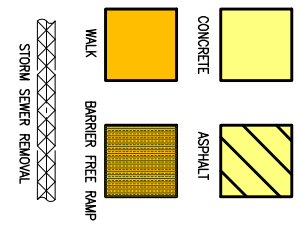


THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION,
AND PERMIT PURPOSES.
John W. Birkhoff

DATE: 10/31/06
13



FOR SUMMARY OF ABBREVIATIONS
SEE SHEET INDEX/GENERAL NOTES SHEET



This record drawing is a completion of the sealed engineering drawing of this project and the contractor is responsible for providing the contractor with the information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.
DATE: 10/3/10



TOWN OF ADDISON, TEXAS

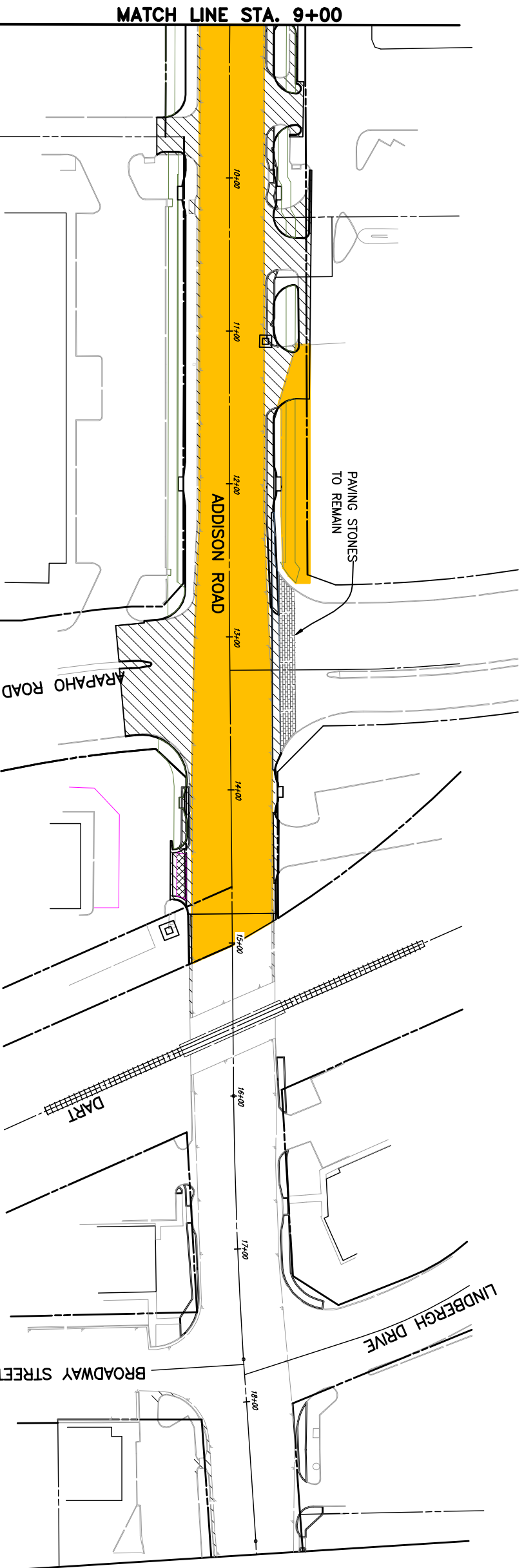
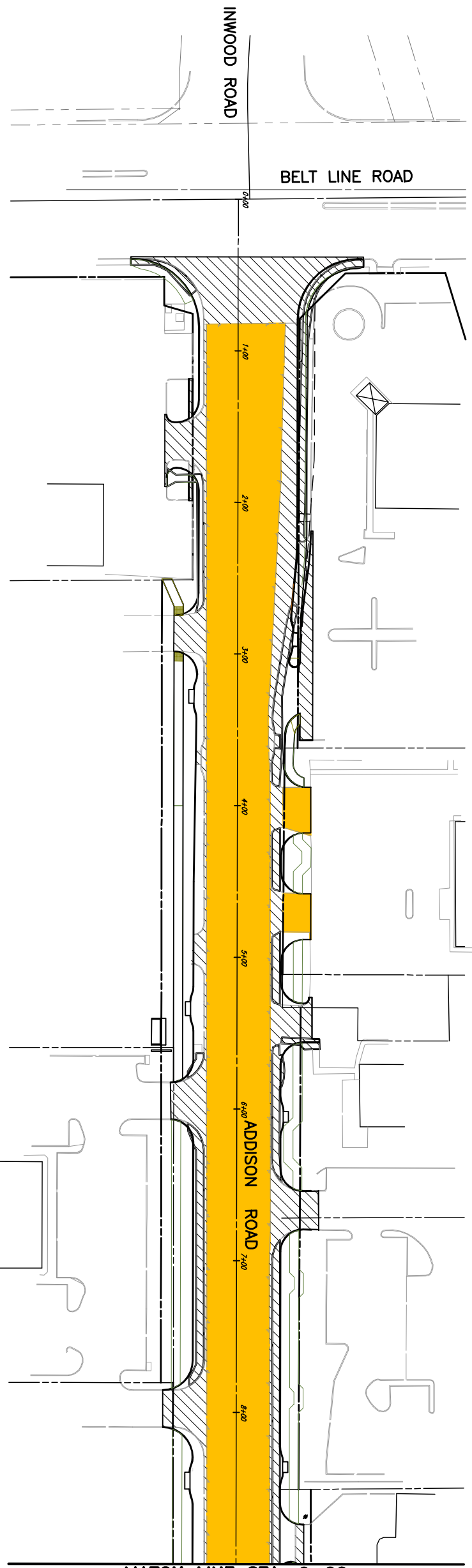
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STA. 14+00 TO STA. 15+01.35




BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.W.B.
DRAWN BY: RLL

PROJECT: 2002-102
DATE: SEPTEMBER 2006

SHEET NO. 8
OF 68 SHEETS

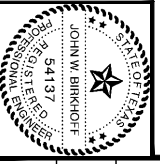


- LEGEND**
-  CONCRETE REMOVAL W/BASE
 -  PAVING STONE REMOVAL W/BASE
 -  ASPHALT REMOVAL W/BASE

These plans and related specifications were prepared by the undersigned engineer in accordance with the specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 10/31/06

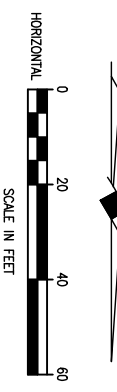
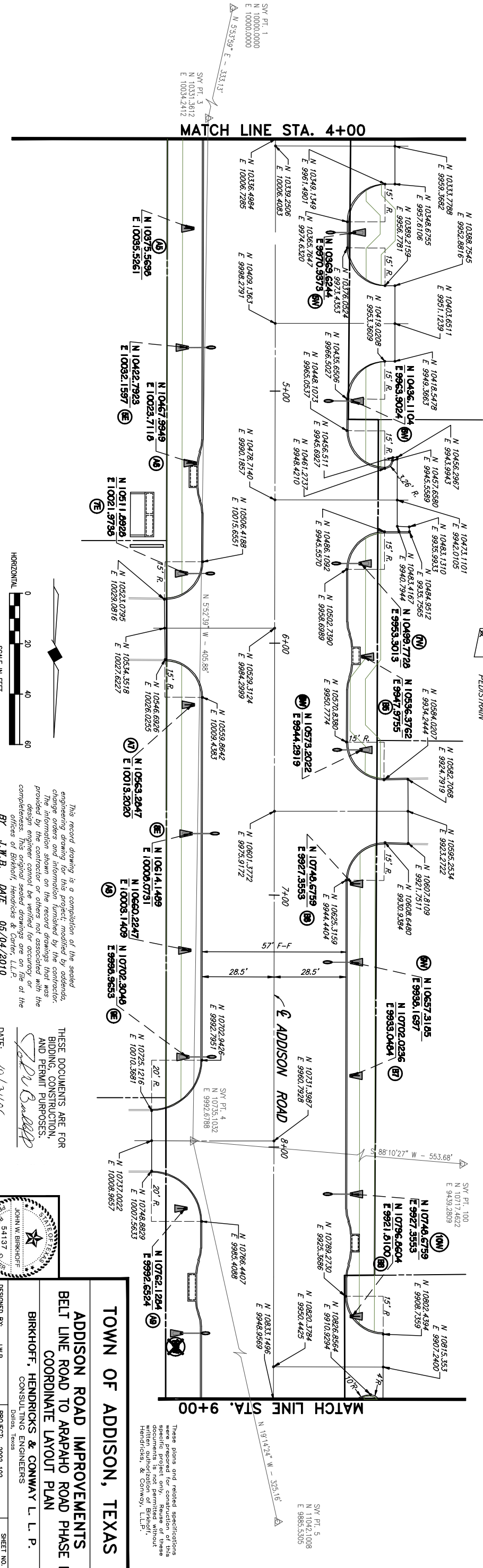
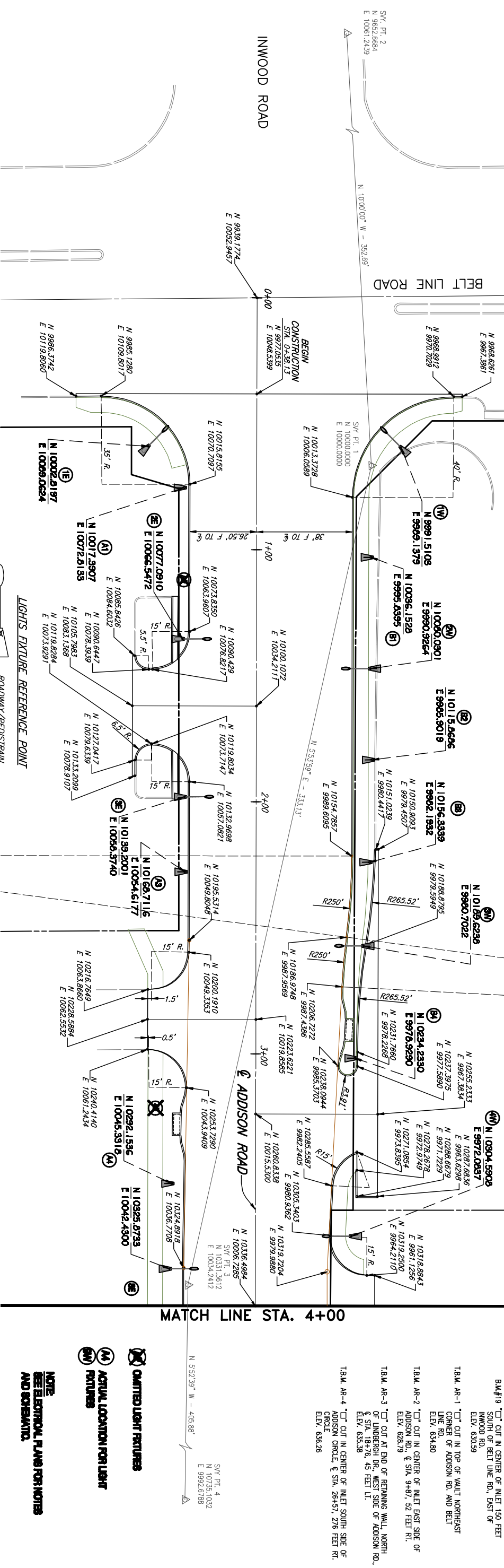


TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
PAVEMENT REMOVAL

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: J.W.B. PROJECT: 2002-102 SHEET NO. 9
 DRAWN BY: R.L.L. DATE: SEPTEMBER 2006 OF 68 SHEETS



This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DESIGNED BY: J.W.B.
 DRAWN BY: R.A.L.
 PROJECT: 2002.102
 DATE: SEPTEMBER 2006
 SHEET NO. 10
 OF 68 SHEETS

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE I

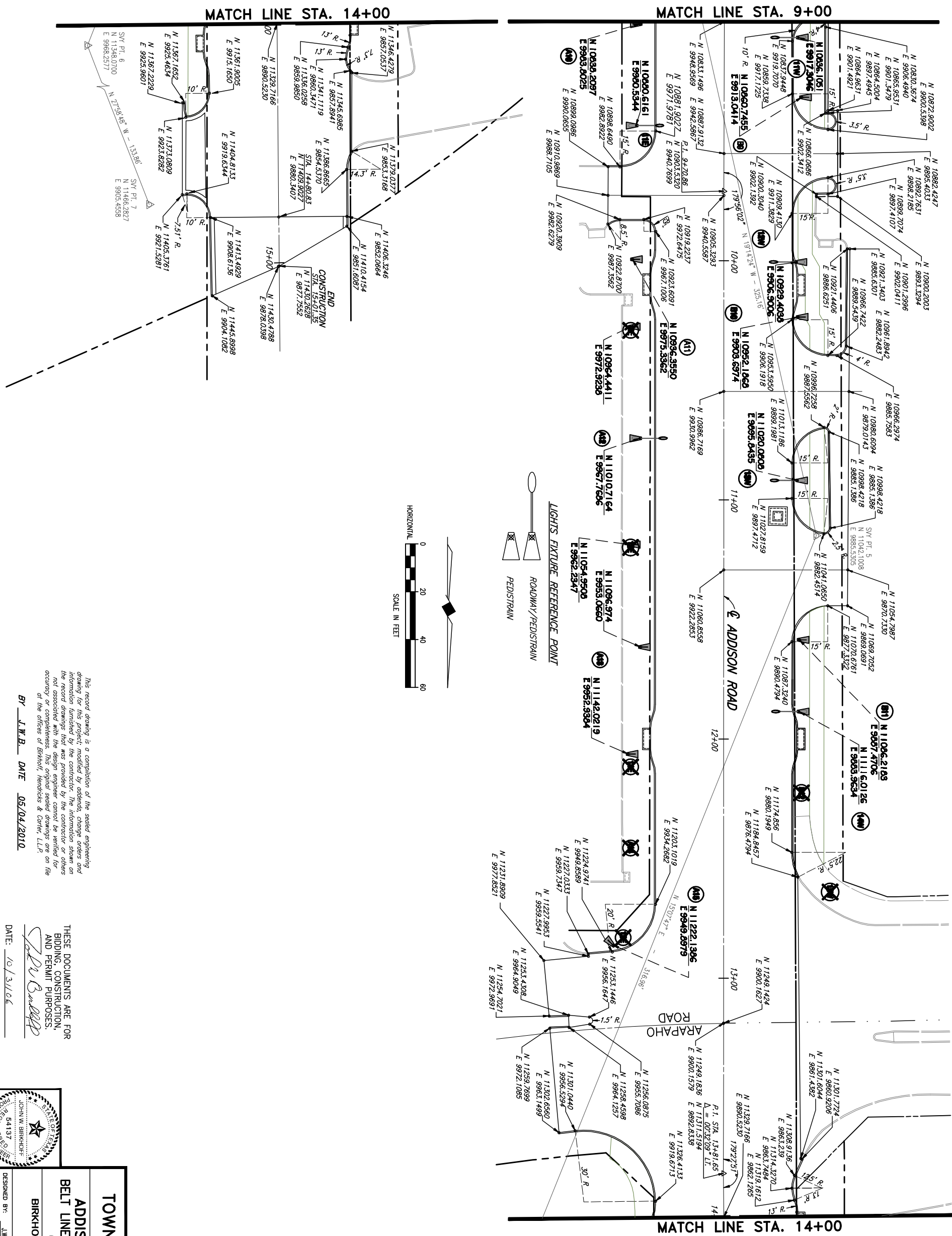
COORDINATE LAYOUT PLAN

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

These plans and related specifications are the property of Birkhoff, Hendricks & Conway, L.L.P. and are not to be reproduced, copied, or used in any way without the written authorization of Birkhoff, Hendricks & Conway, L.L.P.

- BM#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF INWOOD RD. ELEV. 630.59
- T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80
- T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD., 51A, 5+87, 52 FEET RI. ELEV. 633.79
- T.B.M. AR-3 "C" CUT AT END OF RETAINING WALL, NORTH OF UMBERGER DR., WEST SIDE OF ADDISON RD., 51A, 18+76, 45 FEET LT. ELEV. 635.38
- T.B.M. AR-4 "C" CUT IN CENTER OF INLET SOUTH SIDE OF ADDISON CIRCLE, 51A, 26+57, 276 FEET RI. ELEV. 636.26

- DIMITED LIGHT FIXTURES
- ACTUAL LOCATION FOR LIGHT FIXTURES
- NOTE: SEE ELECTRICAL PLANS FOR NOTES AND SCHEDULES.



- OMITTED LIGHT FIXTURES
- ACTUAL LOCATION FOR LIGHT FIXTURES
- NOTE: SEE ELECTRICAL PLAN FOR NOTES AND SCHEMATIC.

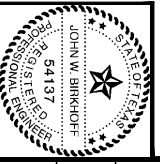
- B.M.#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF INWOOD RD. ELEV. 630.59
- T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80
- T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD. & STA. 9+87.52 FEET RI. ELEV. 628.79
- T.B.M. AR-3 "C" CUT AT END OF RETAINING WALL, NORTH & WEST SIDE OF ADDISON RD., STA. 18+76.45 FEET LI. ELEV. 635.38
- T.B.M. AR-4 "C" CUT IN CENTER OF INLET SOUTH SIDE OF ADDISON CIRCLE, & STA. 26+57.276 FEET RI. ELEV. 636.26

These plans and related specifications are the property of Birkhoff, Hendricks & Conway, L.L.P. No part of these documents is to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAH ROAD PHASE I
COORDINATE LAYOUT PLAN**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas



DESIGNED BY: J.W.B.	PROJECT: 2002102	SHEET NO. 11
DRAWN BY: RLL	DATE: SEPTEMBER 2006	OF 88 SHEETS

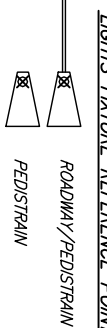
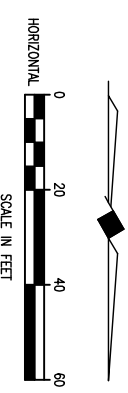
This record drawing is a compilation of the sealed engineering drawings for this project, including field notes, change orders and information furnished to the contractor. The contractor shall retain the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

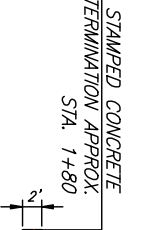
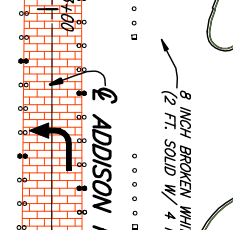
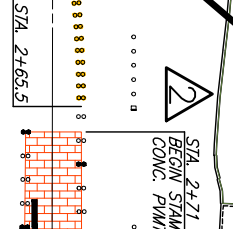
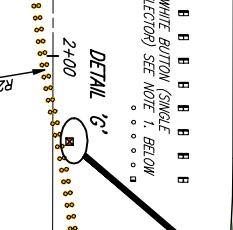
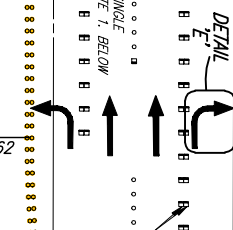
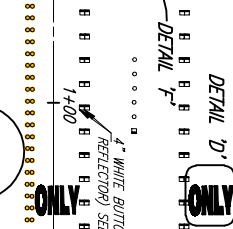
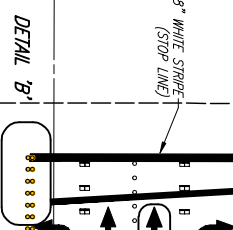
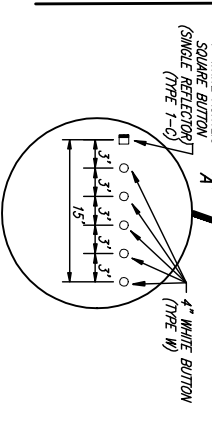
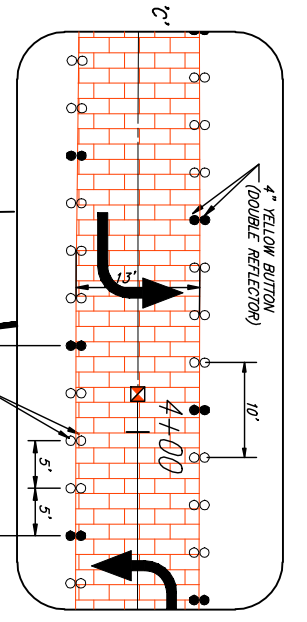
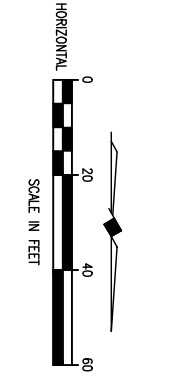
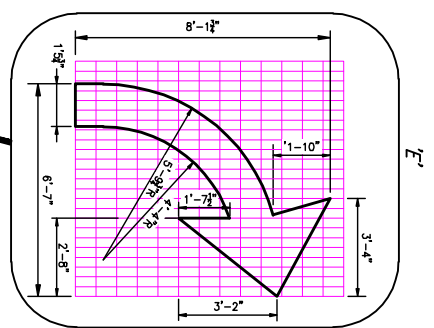
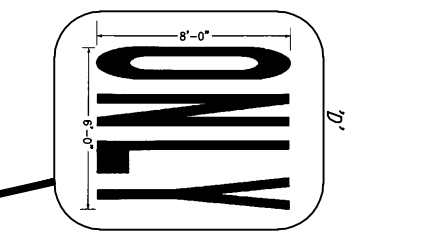
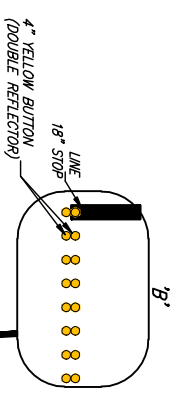
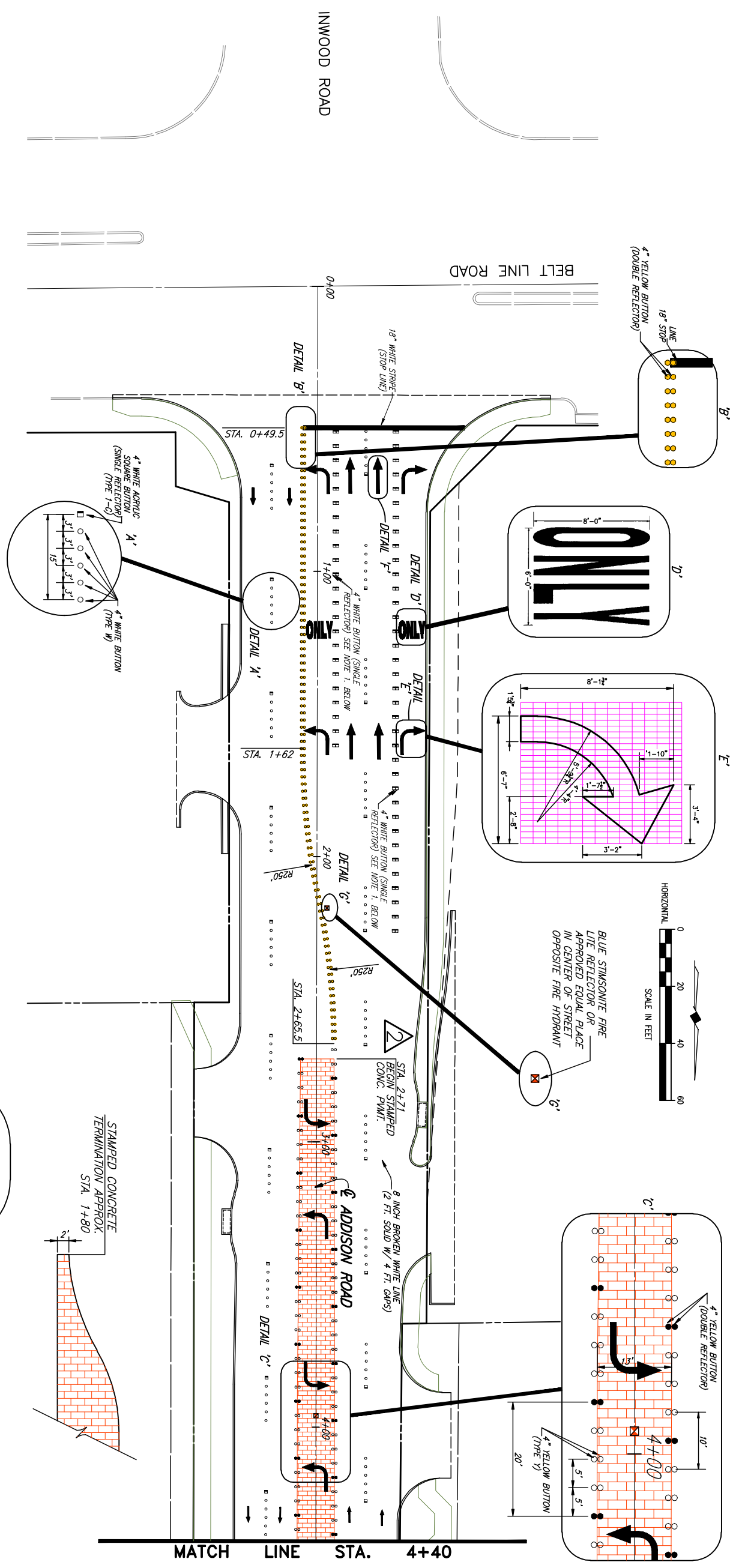
BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

[Signature]

DATE: 10/31/06

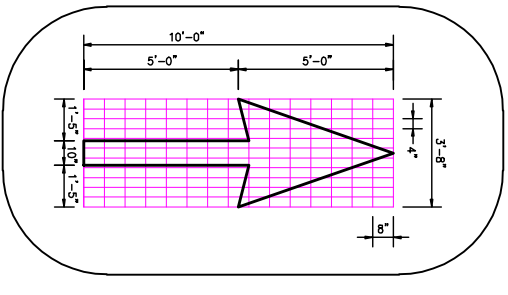




TRAFFIC MARKINGS, BUTTONS & JIGGLE BARS QUANTITIES

132 L.F.	18" WIDE SOLID WHITE THERMOPLASTIC STRIPE	66 L.F.	24" WIDE SOLID WHITE THERMOPLASTIC STRIPE	234 EA.	4" WHITE SINGLE REFLECT. BUTTON (TYPE 1-C) LT. TURN	65 EA.	4" WHITE SINGLE REFLECT. BUTTON (TYPE 1-C) MAIN LANES	322 EA.	4" WHITE BUTTON TYPE W	620 EA.	4" YELLOW BUTTON TYPE Y	338 EA.	4" YELLOW DOUBLE REFLECT. BUTTON	18 EA.	WHITE THERMOPLASTIC LEFT TURN ARROW	2 EA.	WHITE THERMOPLASTIC RIGHT TURN ARROW	4 EA.	WHITE THERMOPLASTIC STRAIGHT AHEAD ARROW	2 EA.	RAIL ROAD SOLID WHITE THERMOPLASTIC CROSSING AHEAD	5 EA.	BLUE FIRE LITE REFLECTOR	5 EA.	6" WIDE BY 8" HIGH SOLID WHITE THERMOPLASTIC WORD "ONLY"
----------	---	---------	---	---------	---	--------	---	---------	------------------------	---------	-------------------------	---------	----------------------------------	--------	-------------------------------------	-------	--------------------------------------	-------	--	-------	--	-------	--------------------------	-------	--

- NOTES:
- LEFT TURN LANE CHANNELIZING BUTTONS SHALL CONSIST OF A DOUBLE ROW OF 4 INCH WHITE REFLECTIVE BUTTONS ON 3 FOOT CENTERS. (TYPE 1-C) REFLECTIVE FACINGS ONCOMING TRAFFIC.
 - TRAFFIC BUTTONS & JIGGLE BARS SHALL BE FROM A SINGLE MANUFACTURER.
 - TRAFFIC BUTTONS & JIGGLE BARS SHALL SIT ON EPOXY "CUSHION". BUTTONS SHALL NOT BE IN DIRECT CONTACT WITH THE PAVEMENT.
 - EPOXY SHALL BE IN ACCORDANCE WITH TDDOT ITEM 575 TYPE I & I-M.
 - CENTER TWO WAY LEFT TURN LANE CHANNELIZING BUTTONS SHALL CONSIST OF A DOUBLE ROW OF YELLOW BUTTONS WITH COMBINATION OF TYPE Y & DOUBLE REFLECTIVE BUTTONS. SEE DETAIL C.
 - DOUBLE REFLECTIVE BLU HYDRANT BUTTONS AS NEEDED.



DETAIL F

ADDENDUM NO. 2
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
PAVEMENT MARKING DETAILS

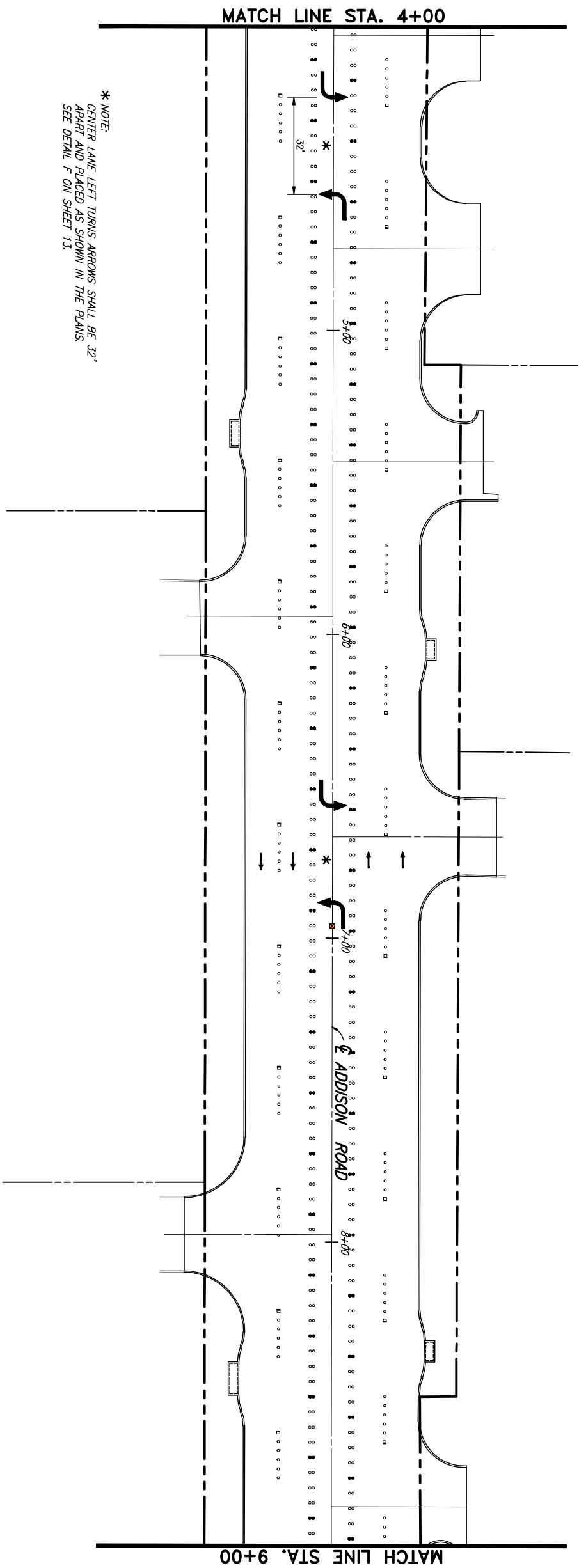
BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
DATE: 10/31/06



DESIGNED BY: J.M.B.	PROJECT: 2002 102	SHEET NO. 13
DRAWN BY: R.L.L.	DATE: SEPTEMBER 2006	OF 68 SHEETS

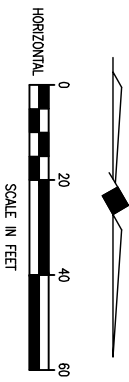
These plans and related specifications were prepared for construction of this project. The information shown on these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



* NOTE:
 CENTER LANE LEFT TURNS ARROWS SHALL BE 32'
 APART AND PLACED AS SHOWN IN THE PLANS.
 SEE DETAIL F ON SHEET 13.

This record drawing is a completion of the sealed engineering design of this project prepared by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.W.B. DATE 05/04/2010

These plans and related specifications are specific to this project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.
 DATE: 10/31/06

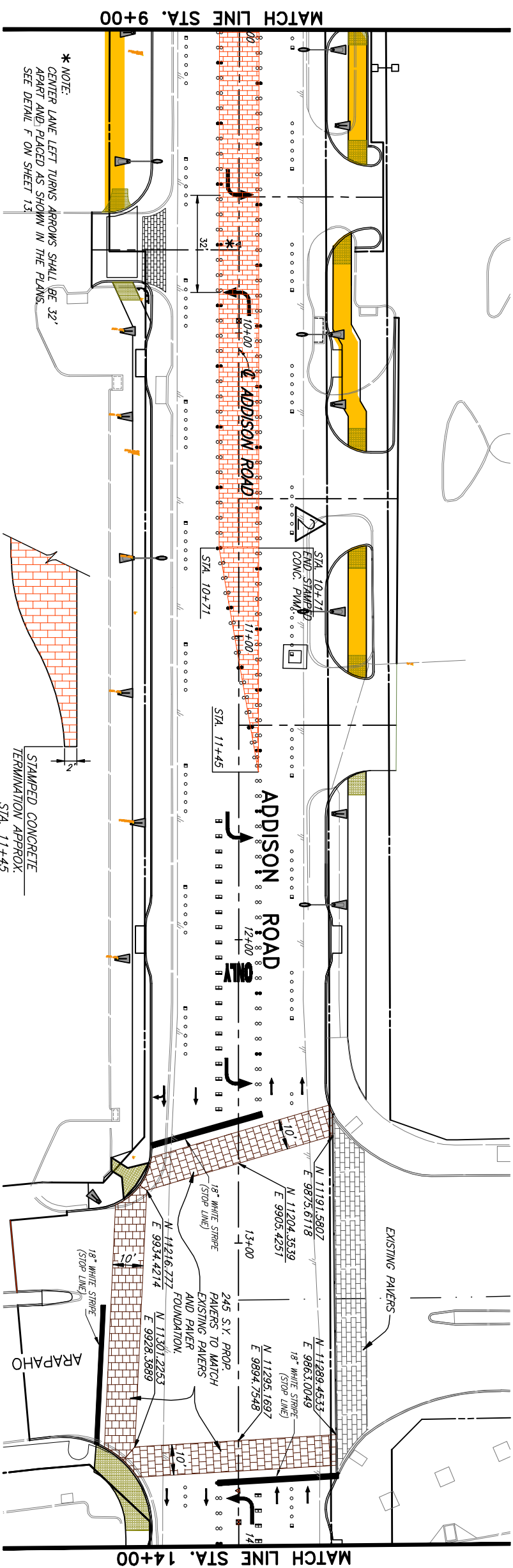
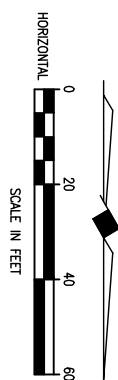


TOWN OF ADDISON, TEXAS

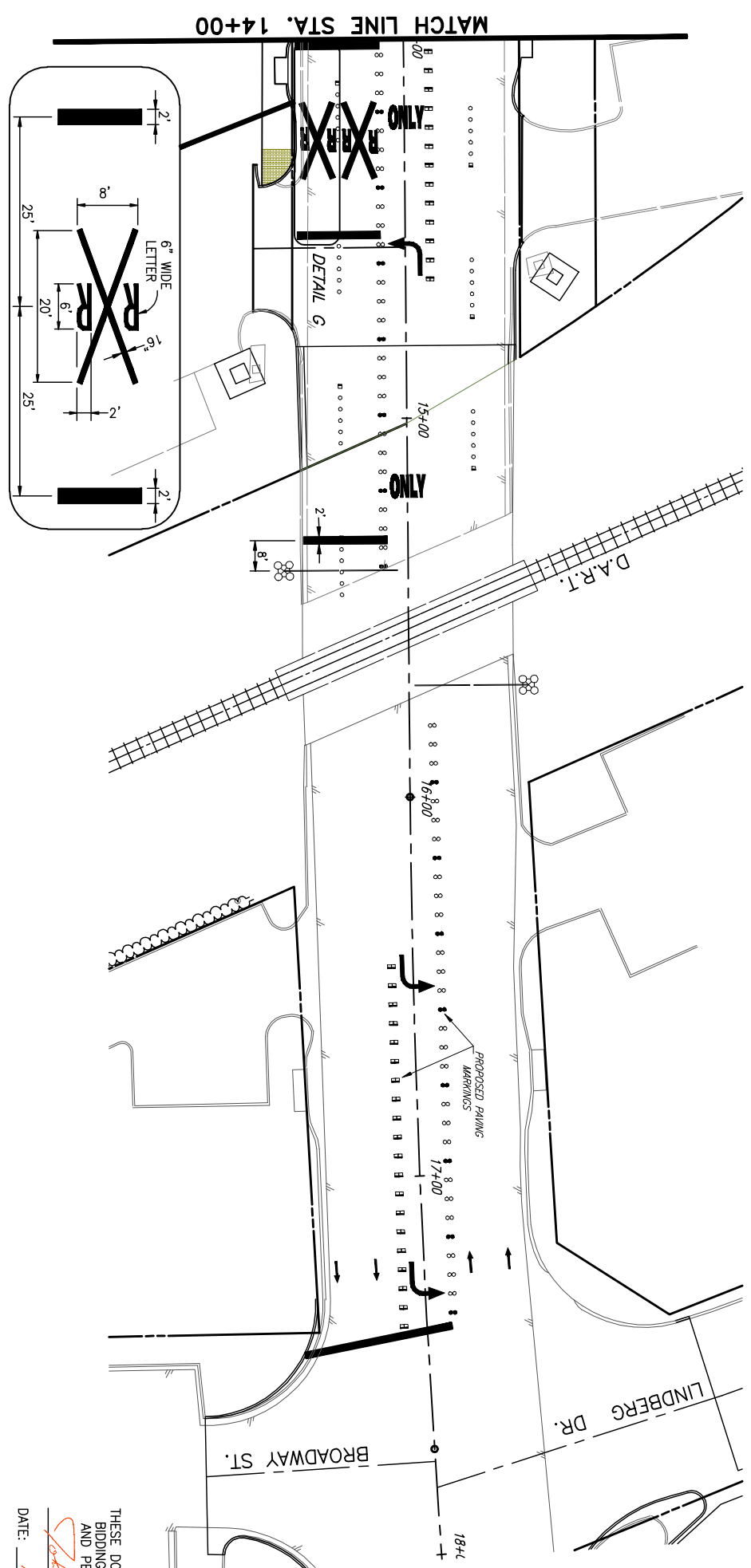
**ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 PAVEMENT MARKING LAYOUT SHEET**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: <u>J.W.B.</u>	PROJECT: <u>2002_102</u>	SHEET NO. <u>14</u>
DRAWN BY: <u>R.L.L.</u>	DATE: <u>SEPTEMBER 2006</u>	OF <u>68</u> SHEETS



* NOTE:
CENTER LANE LEFT TURN ARROWS SHALL BE 32' APART AND PLACED AS SHOWN IN THE PLANS. SEE DETAIL F ON SHEET 13.



LIMIT OF STAMPED CONCRETE AT EACH END OF PROJECT

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, engineering notes, and other documents. The location shown on this record drawing shall be the location shown on the most drawings that the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P. BY J.W.B. DATE 05/04/2010

These plans and related specifications were prepared for construction of this project. The design engineer's written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

ADDENDUM NO. 2

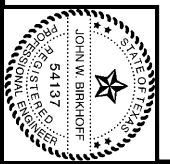
TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
PAVEMENT MARKING LAYOUT SHEET**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

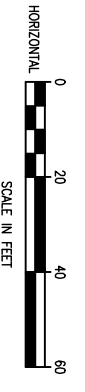
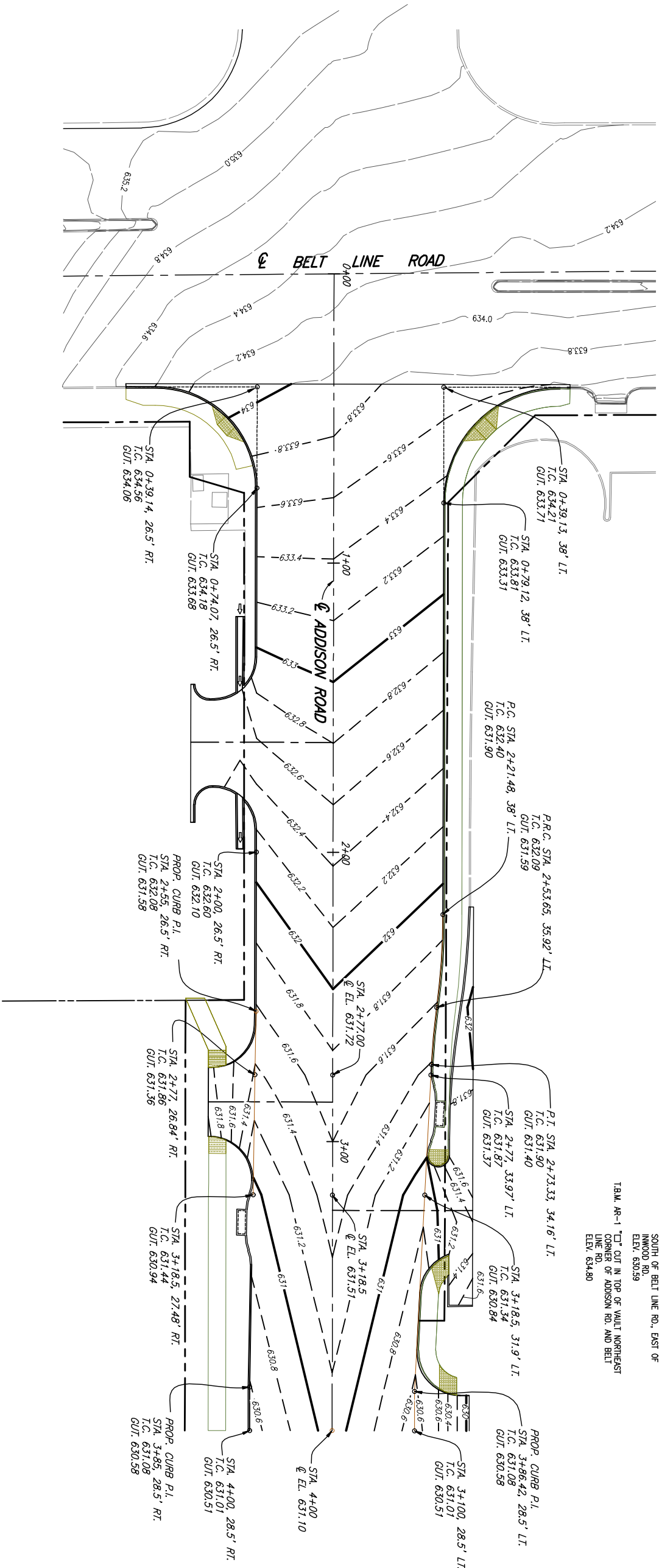
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.

DATE: 10/31/06



DESIGNED BY: <u>J.W.B.</u>	PROJECT: <u>2002 102</u>	SHEET NO. <u>15</u>
DRAWN BY: <u>R.L.L.</u>	DATE: <u>SEPTEMBER 2006</u>	OF <u>88</u> SHEETS

LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS (PAVEMENT SURFACES)



B.M.#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF INWOOD RD.
ELEV. 630.59

T.A.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD.
ELEV. 634.80

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy, or completeness. This special sealed drawing is one of the pieces of Bid, Offer, Proposals & Order of the

BY J.W.B. DATE 05/04/2010

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

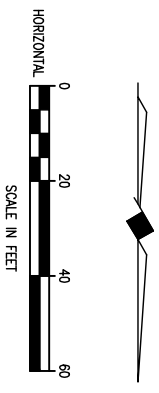
BELT LINE ROAD TO KELLER SPRING ROAD

BELT LINE ROAD CONTOURS

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

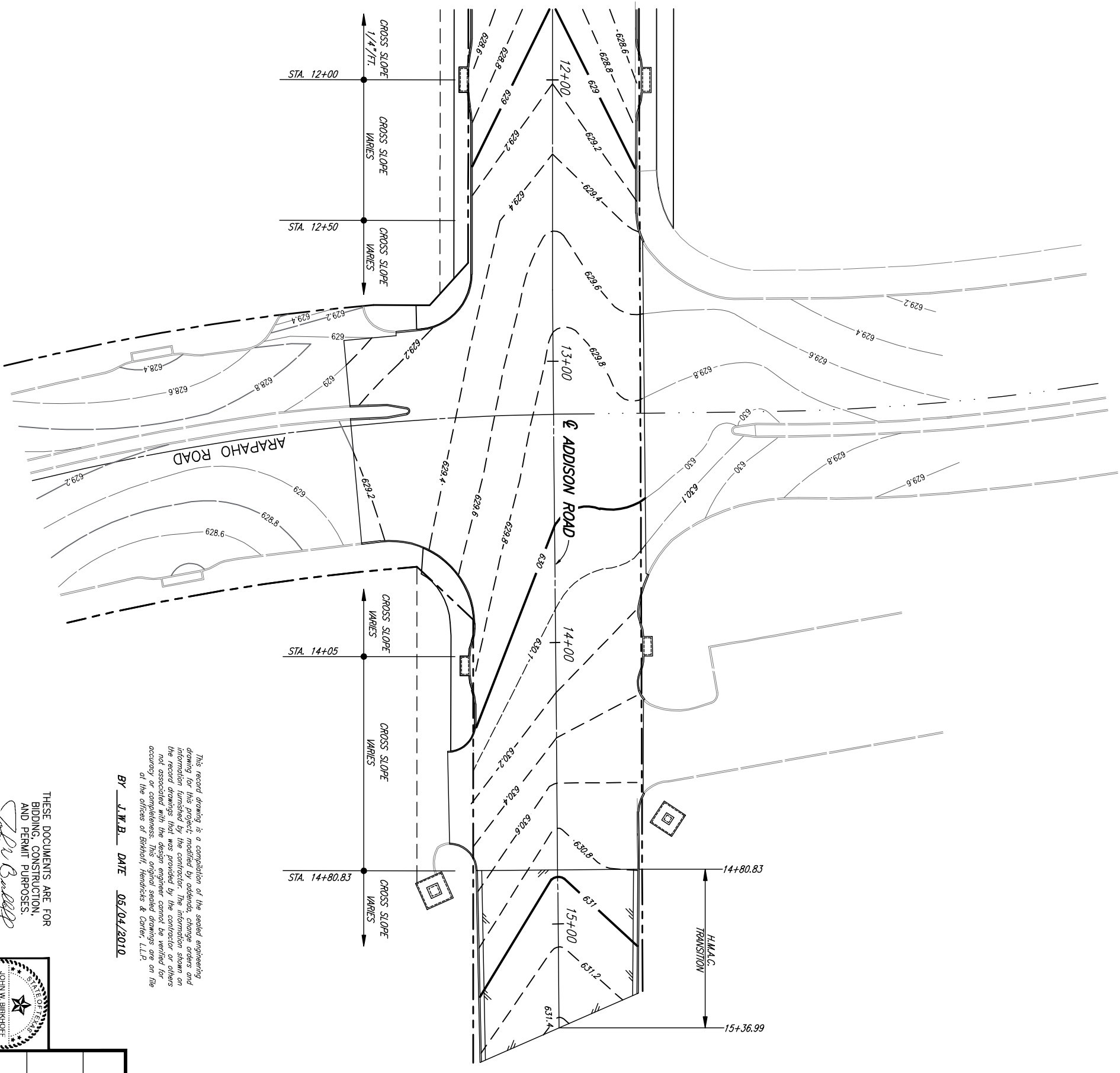
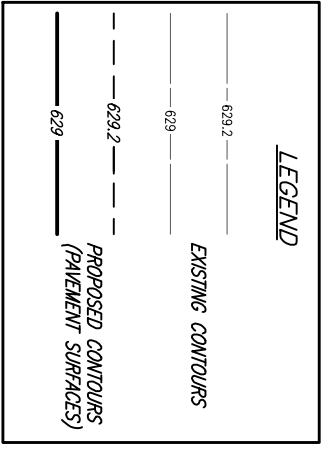
DESIGNED BY: J.W.B. PROJECT: 2002_102 SHEET NO. 16

DRAWN BY: R.L.L. DATE: SEPTEMBER 2006 OF 68 SHEETS



T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD. @ STA. 9+87.52 FEET R.I. ELEV. 628.79

T.B.M. AR-3 "C" CUT AT END OF RETAINING WALL NORTH OF LINDERBACH DR. WEST SIDE OF ADDISON RD. @ STA. 18+76.49 FEET LI. ELEV. 635.38



This record drawing is a compilation of the sealed engineering drawing for this project modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conroy, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the express written consent of Birkhoff, Hendricks, & Conroy, L.L.P.

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE I

ARAPAHO ROAD CONTOURS

BIRKHOFF, HENDRICKS & CONWAY L. L. P.

CONSULTING ENGINEERS

Del Rio, Texas

DESIGNED BY: J.W.B.

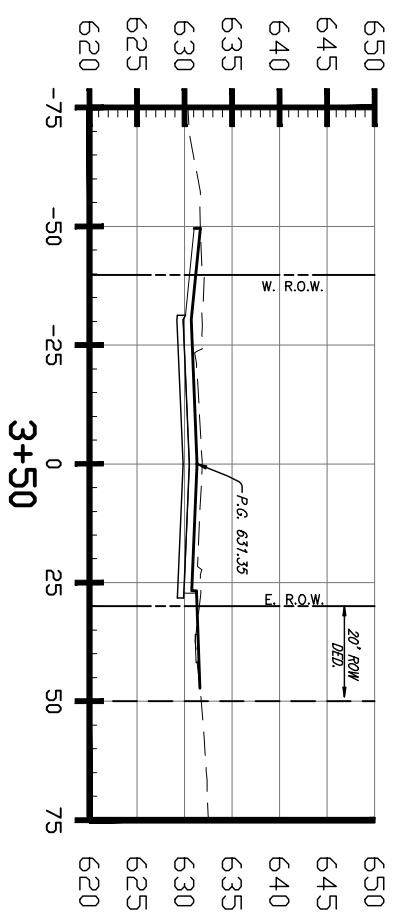
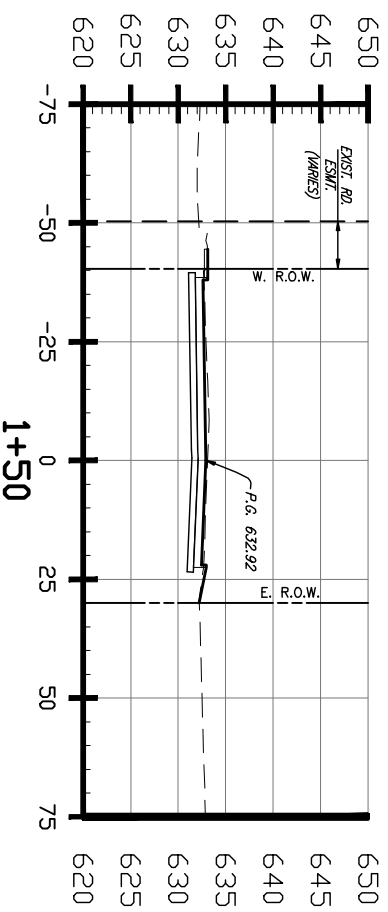
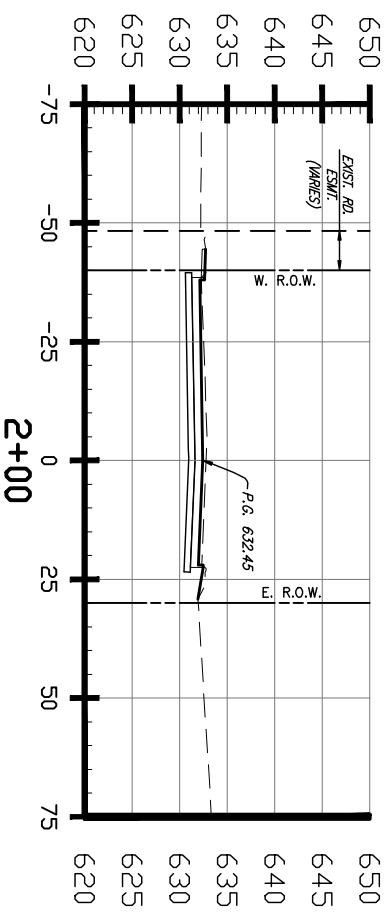
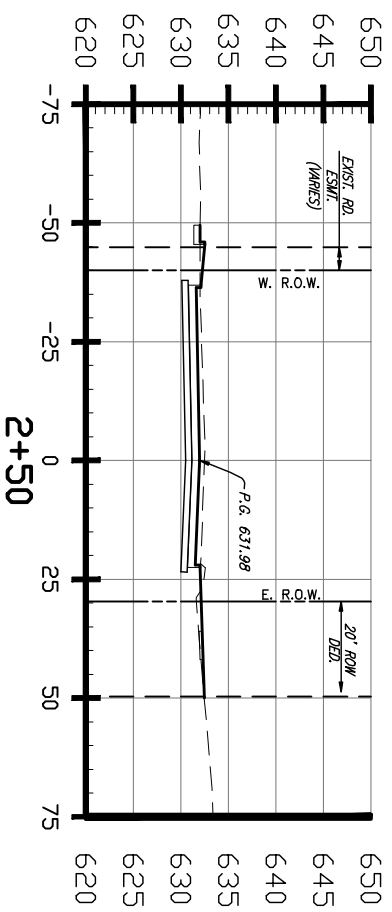
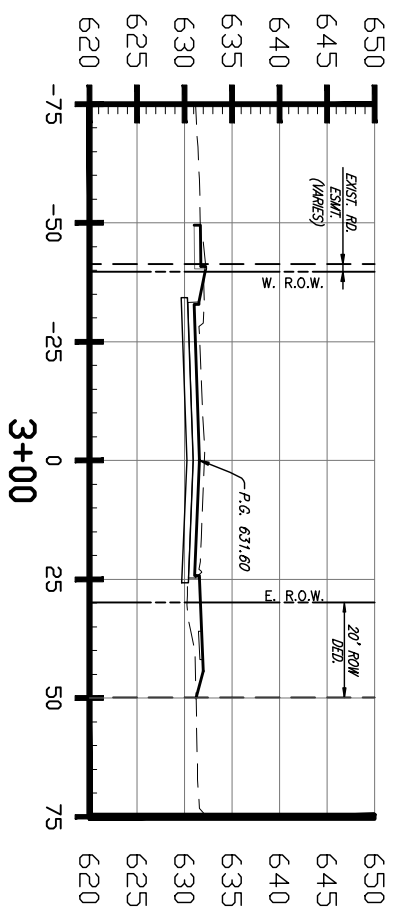
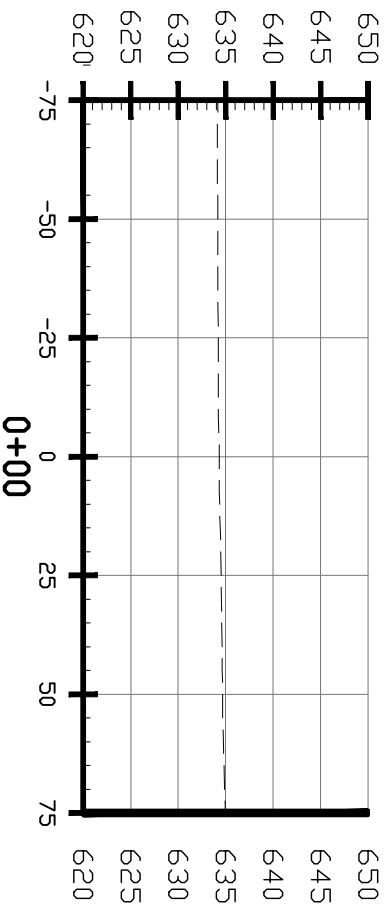
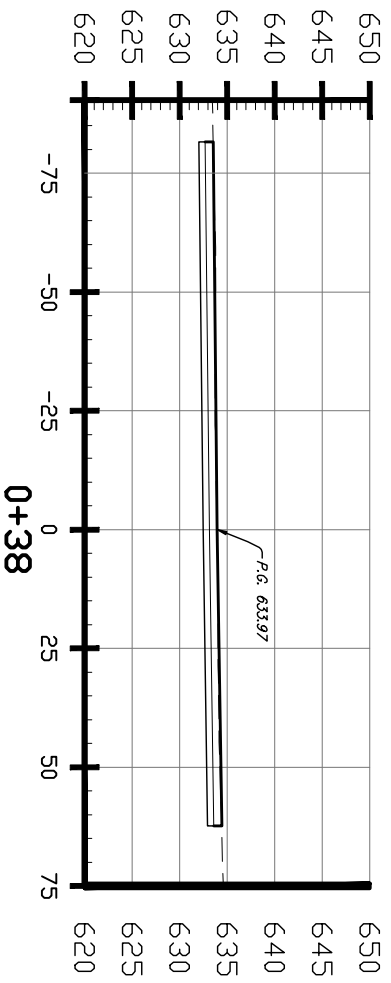
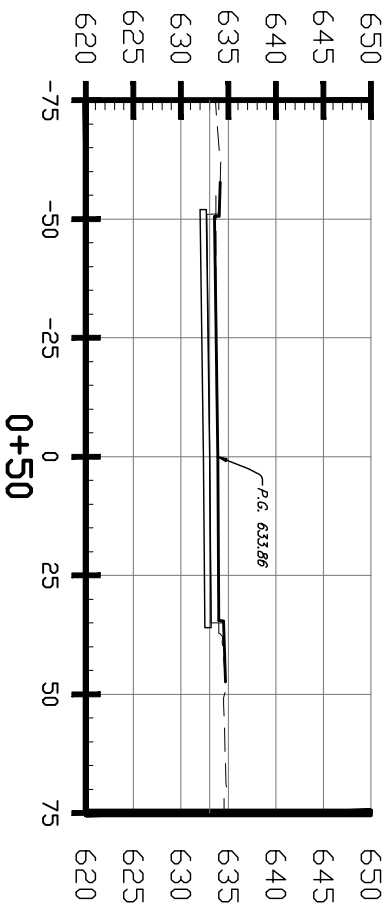
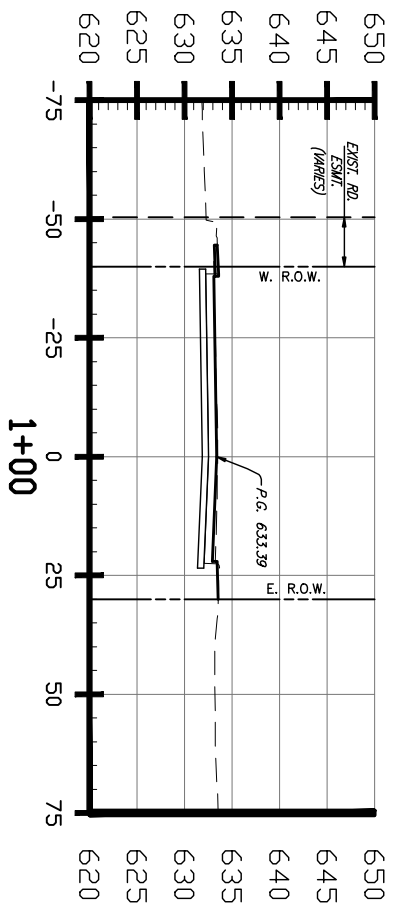
PROJECT: 2002 102

DATE: SEPTEMBER 2006

DRAWN BY: R.L.L.

SHEET NO. 17

OF 68 SHEETS



This record drawing is a compilation of the scaled engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original scaled drawing is on file at the office of Birkhoff, Hendricks & Conway, L.L.P.

By J.M.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

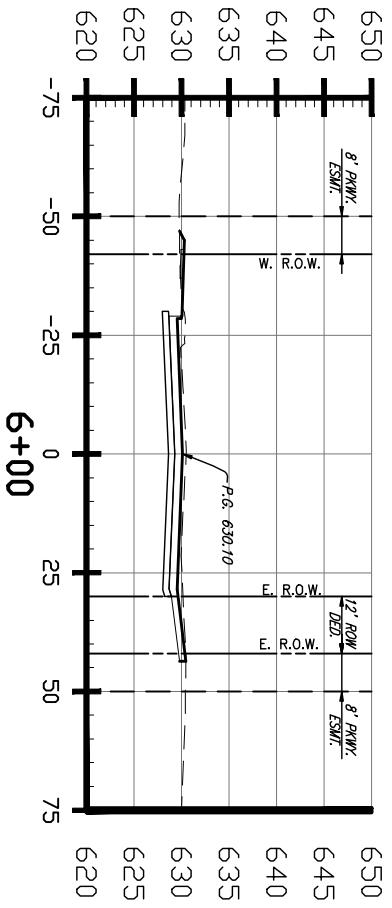
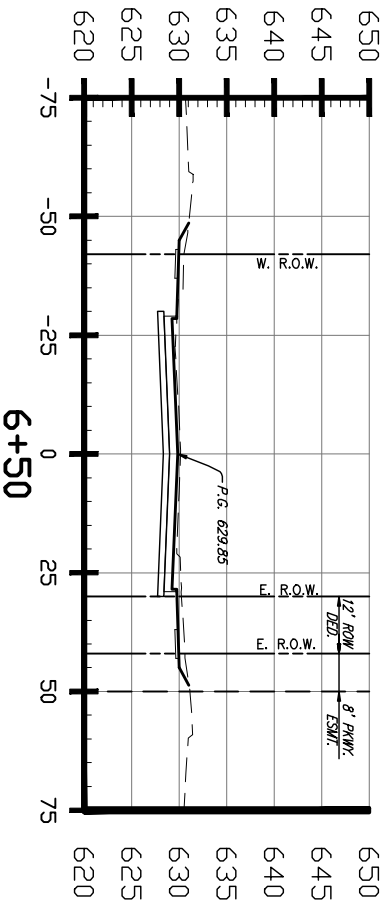
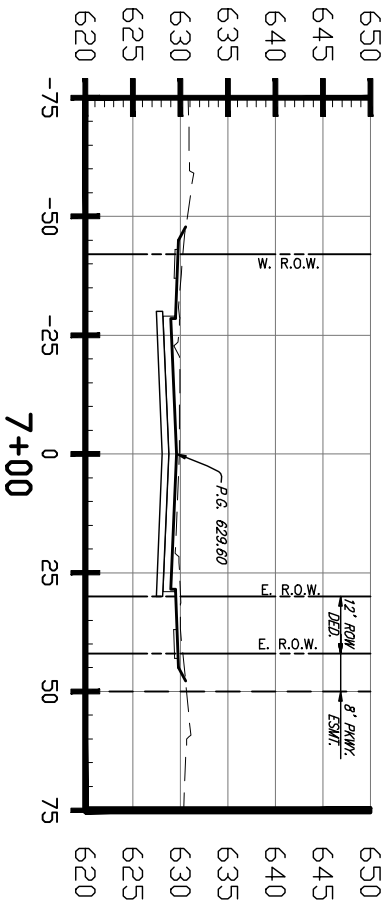
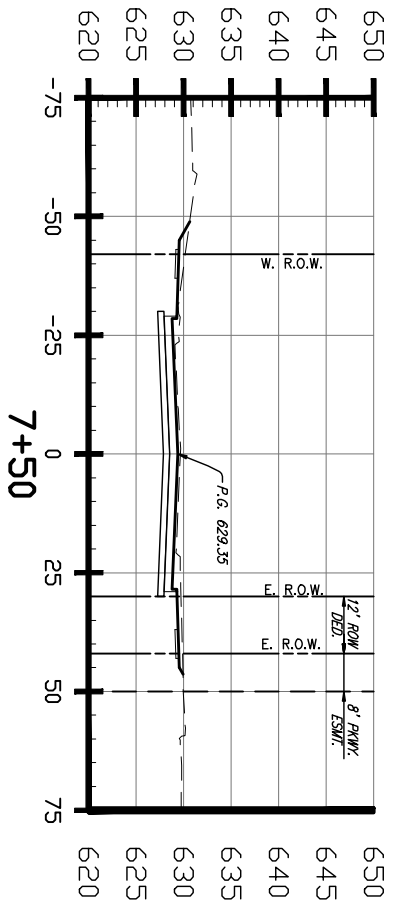
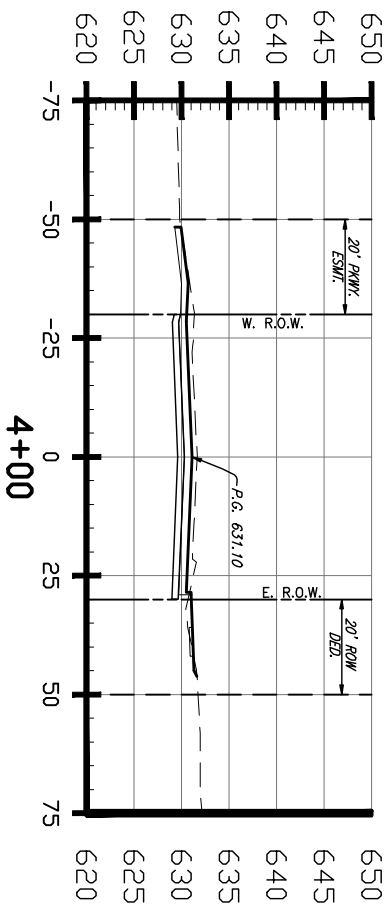
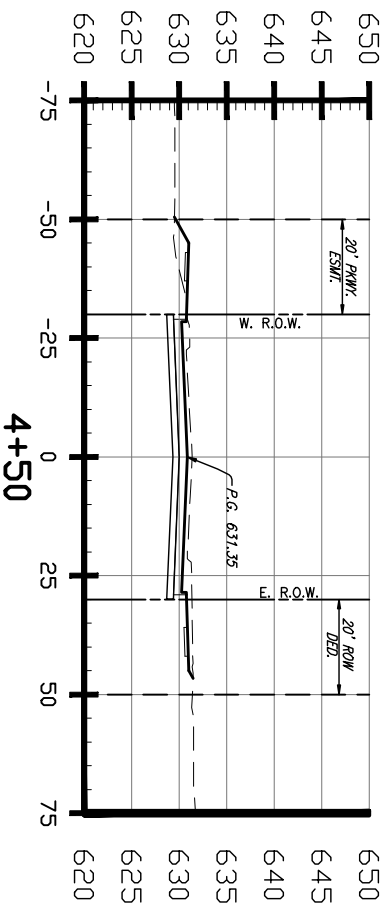
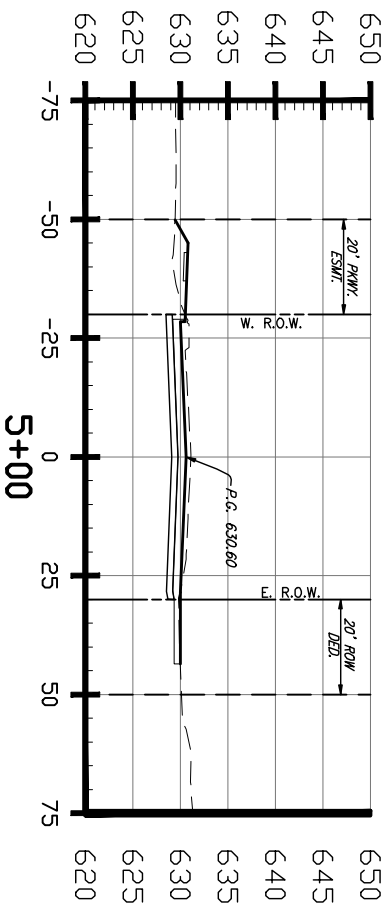
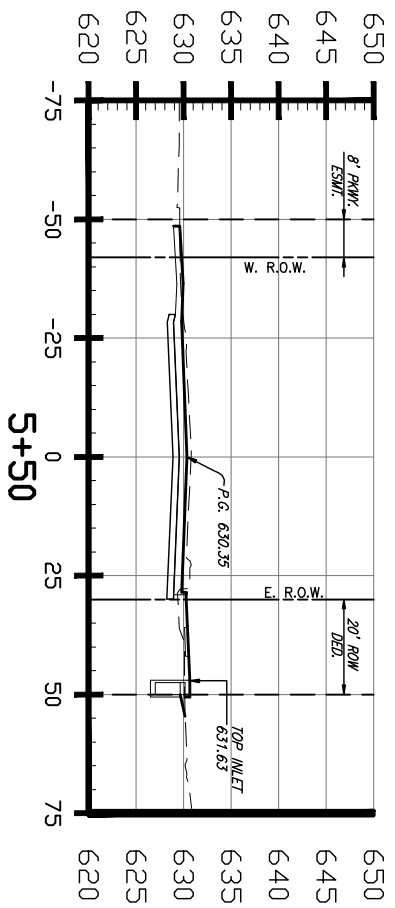
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE 1
CROSS SECTIONS

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.M.B.
DRAWN BY: R.L.L.

PROJECT: 2002 102
DATE: SEPTEMBER 2006

SHEET NO. 18
OF 68 SHEETS



This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.M.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks, & Conway, L.L.P.

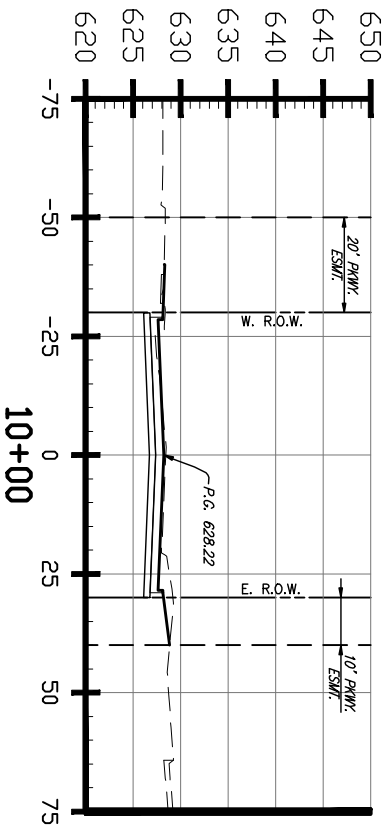
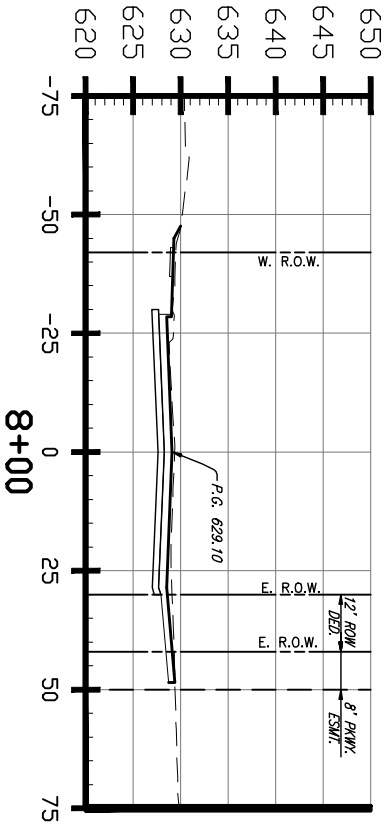
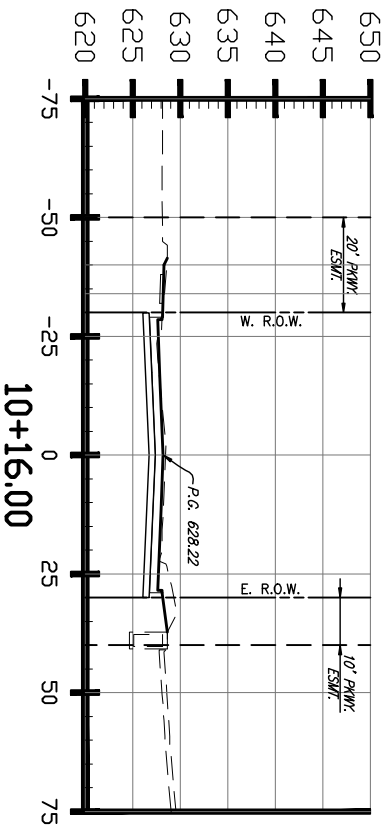
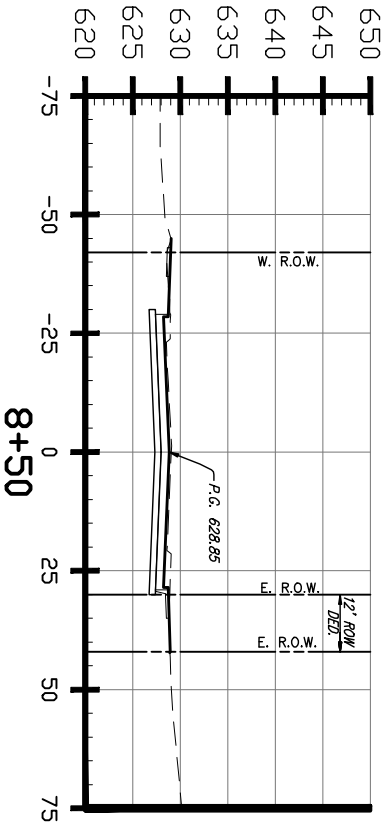
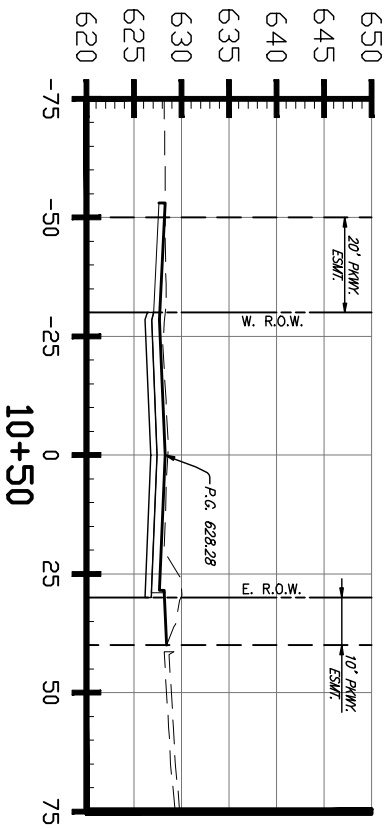
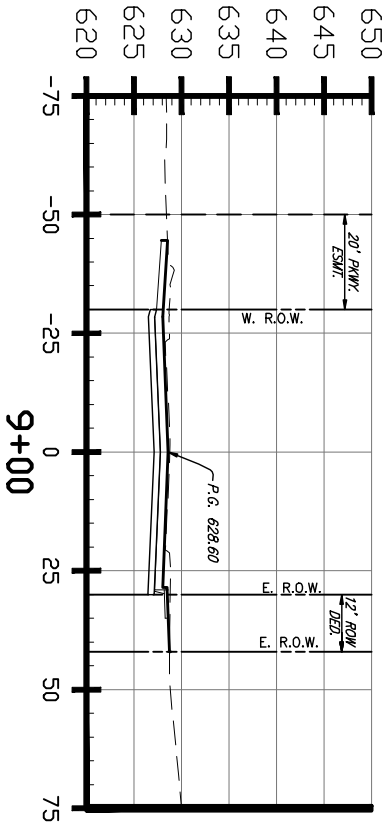
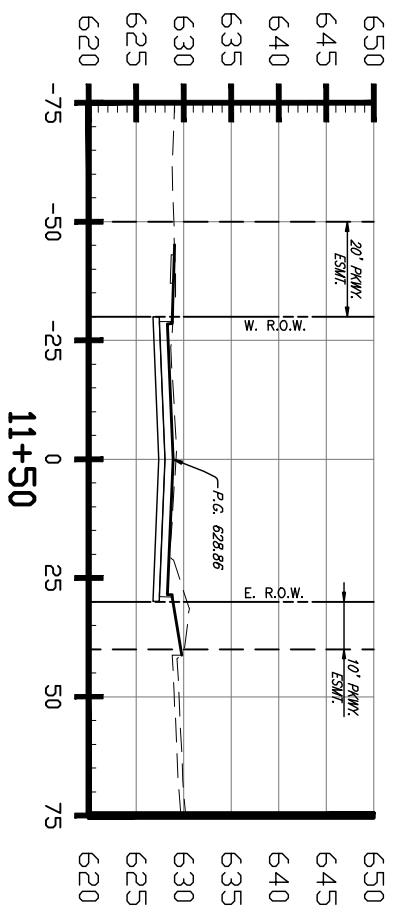
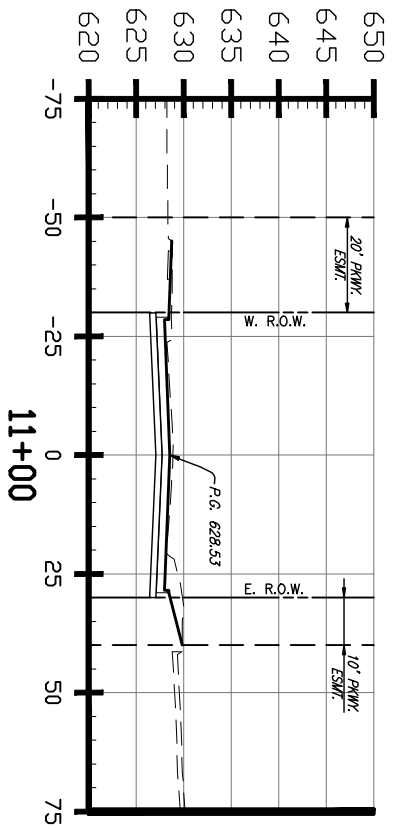
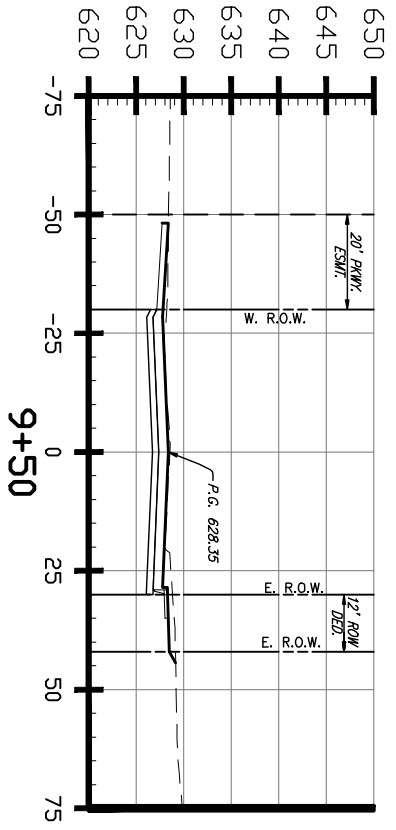
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE 1

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.M.B. PROJECT: 2002 102 SHEET NO. 19
DRAWN BY: R.L.L. DATE: SEPTEMBER 2006 OF 68 SHEETS



This record drawing is a compilation of the steeled engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original steeled drawings are on file at the office of Birkhoff, Hendricks & Conaway, LLP.

By J.M.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.M.B.

DATE: 10/31/06

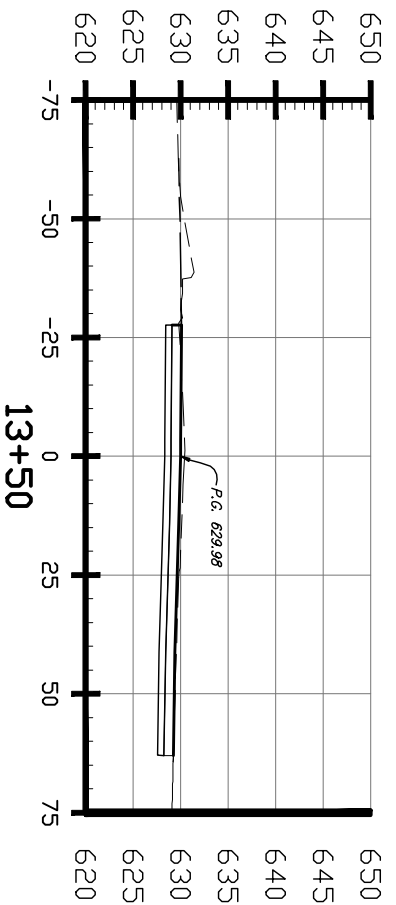
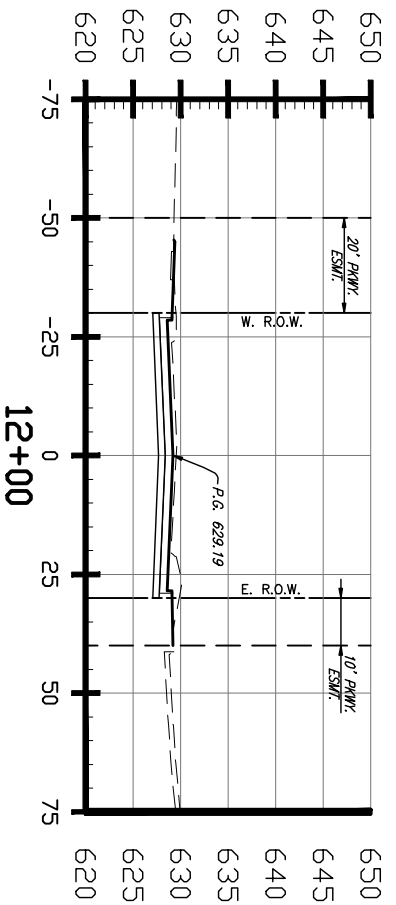
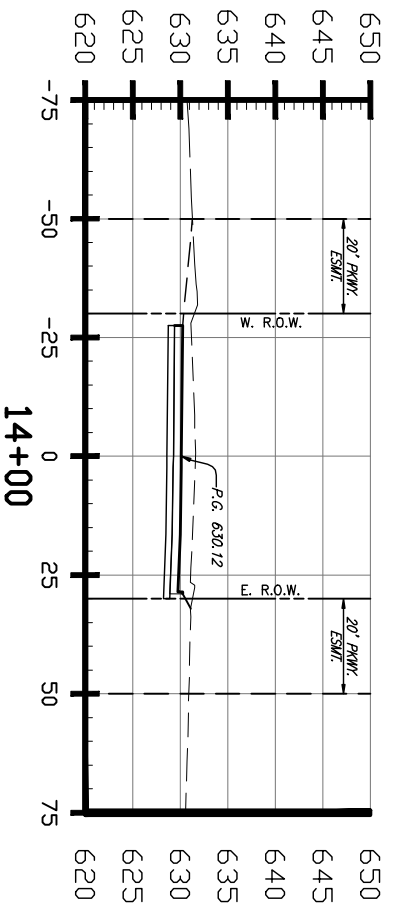
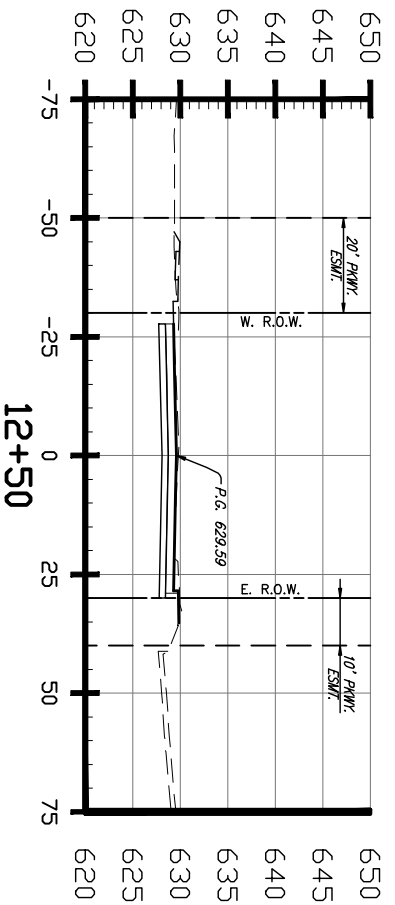
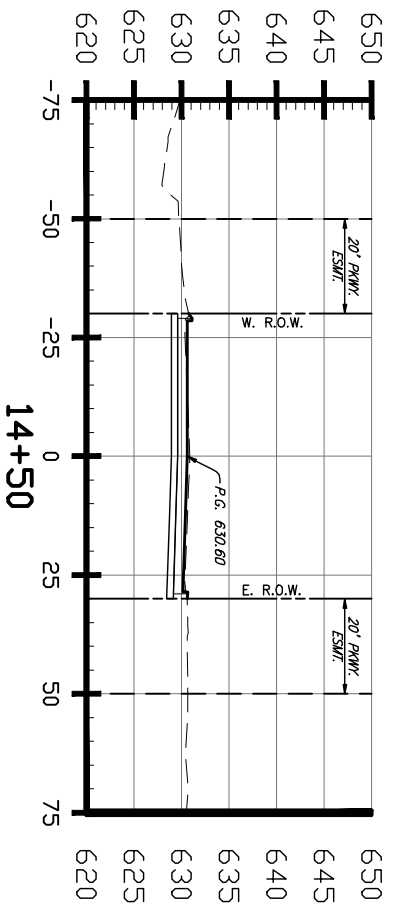
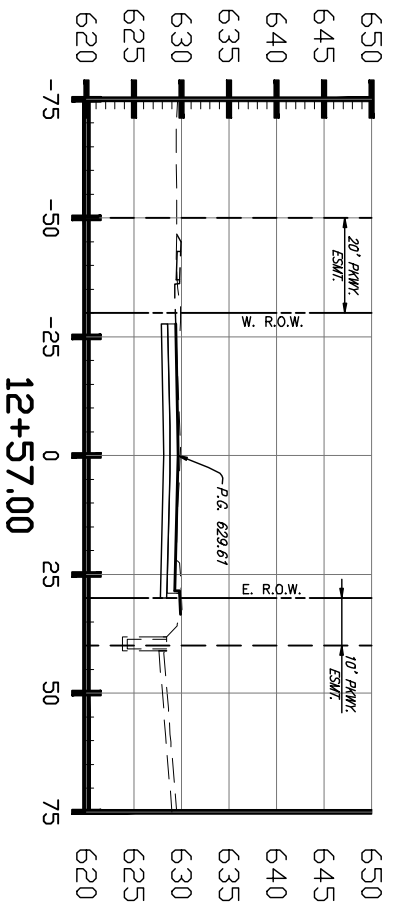
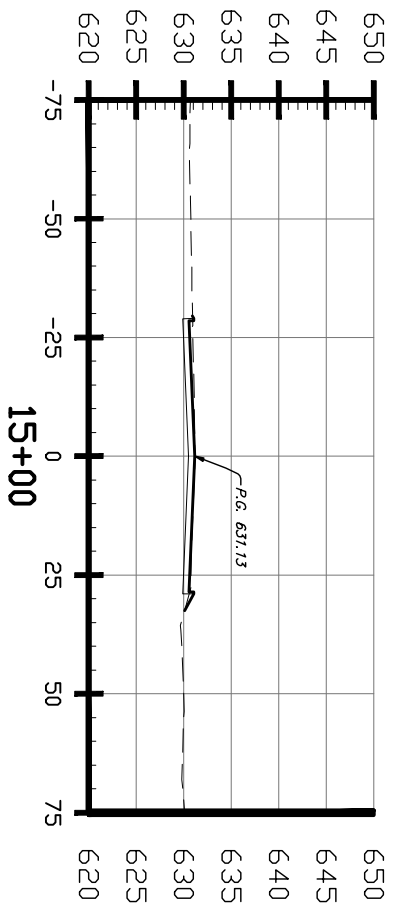
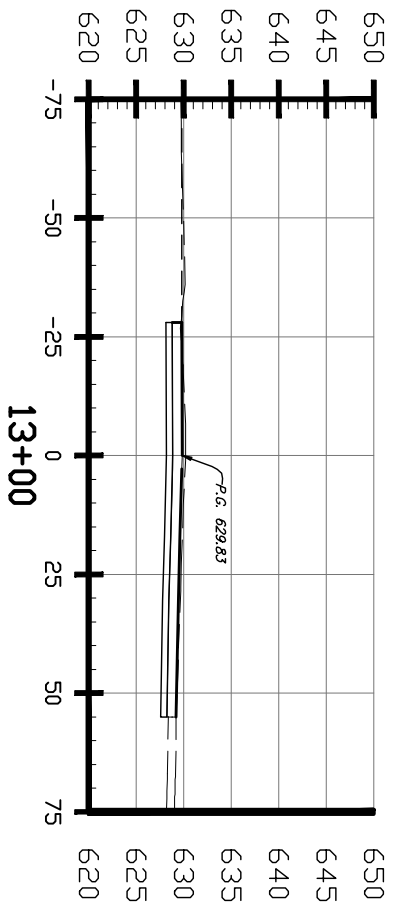


TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE 1
CROSS SECTIONS**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.M.B. PROJECT: 2002.102 SHEET NO. 20
DRAWN BY: R.L.L. DATE: SEPTEMBER 2006 OF 68 SHEETS



This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

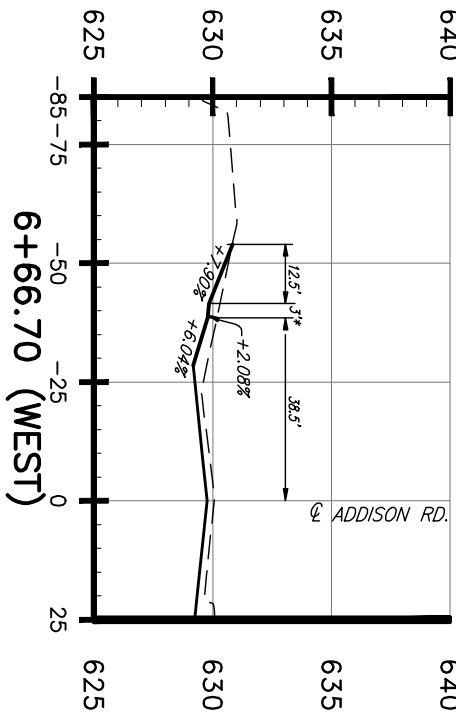
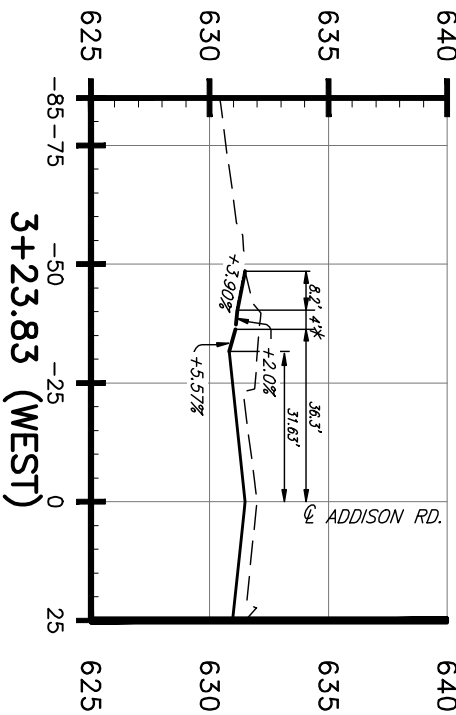
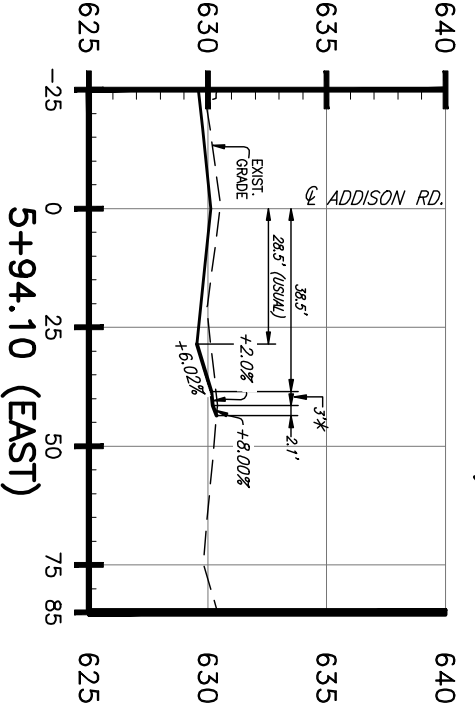
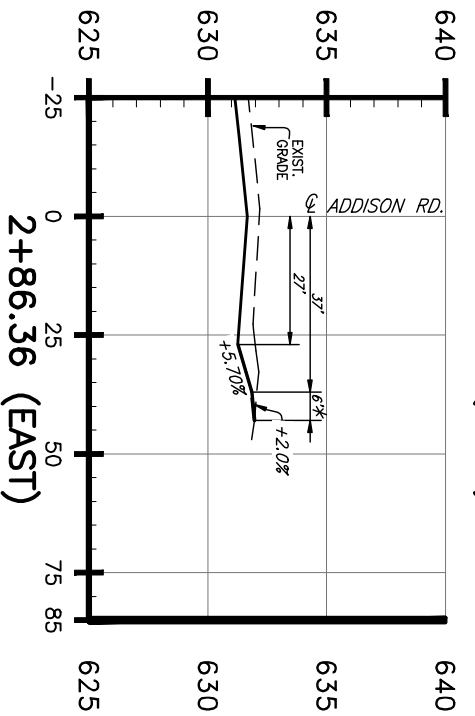
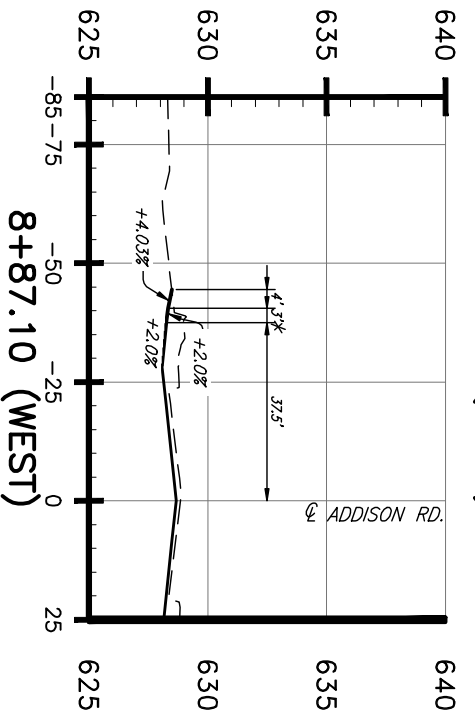
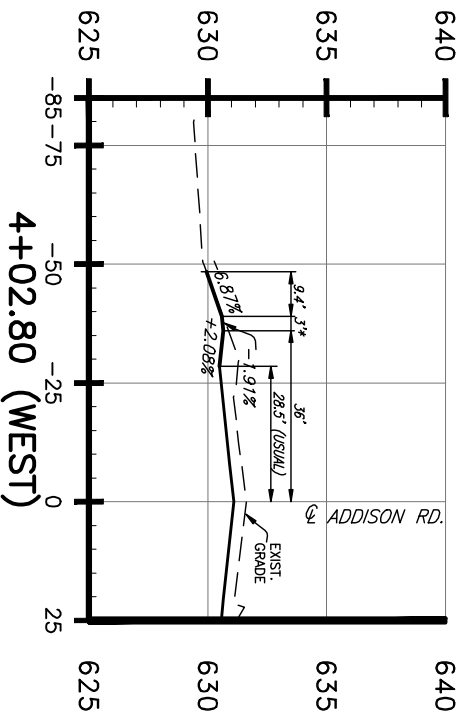
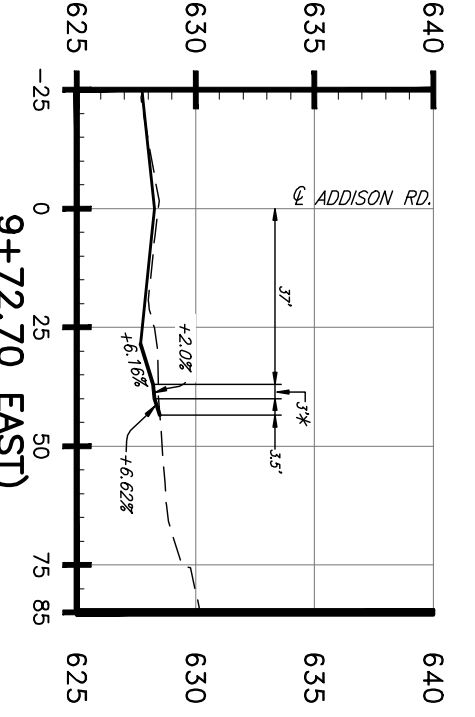
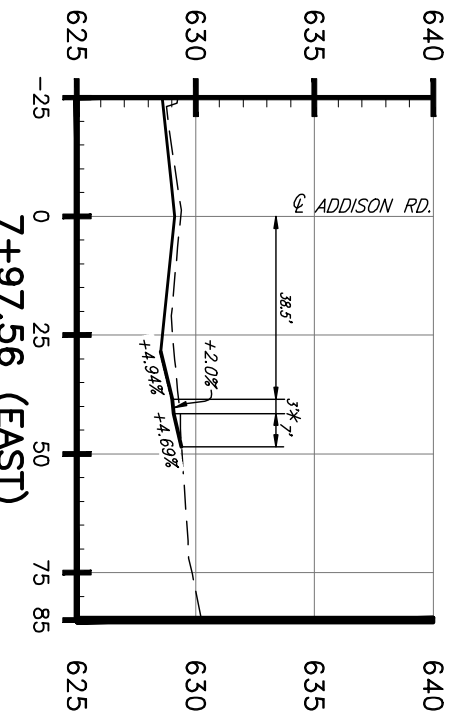
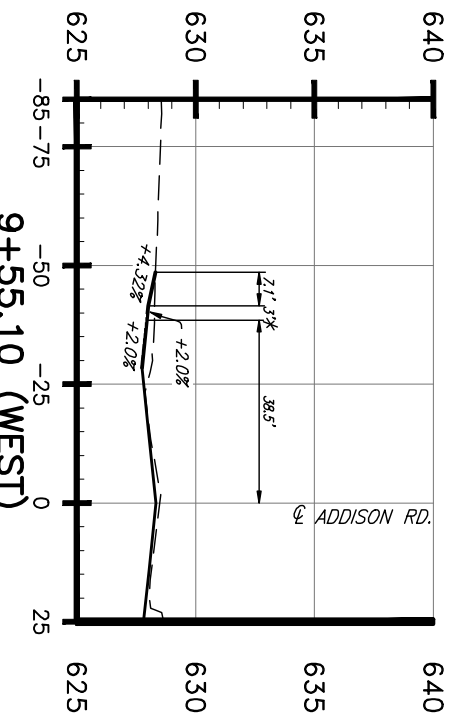
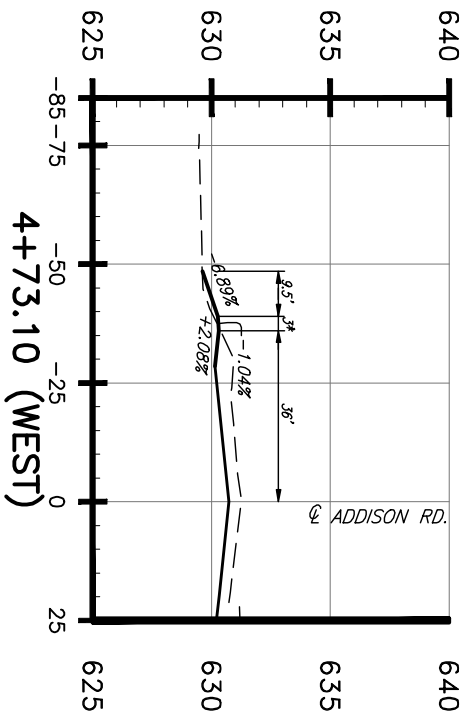
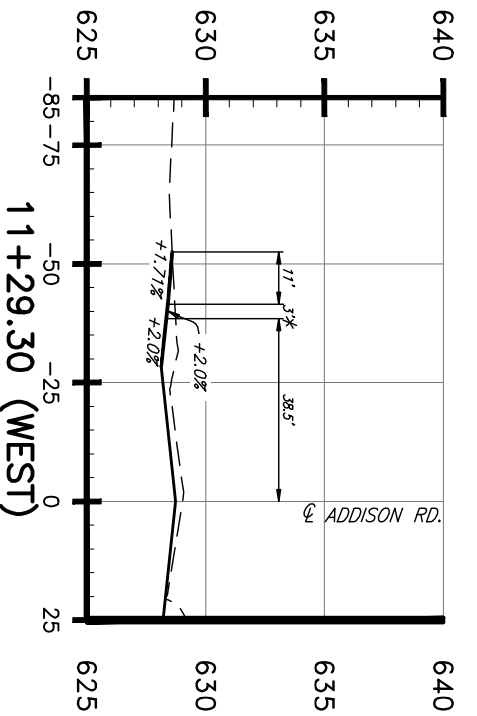
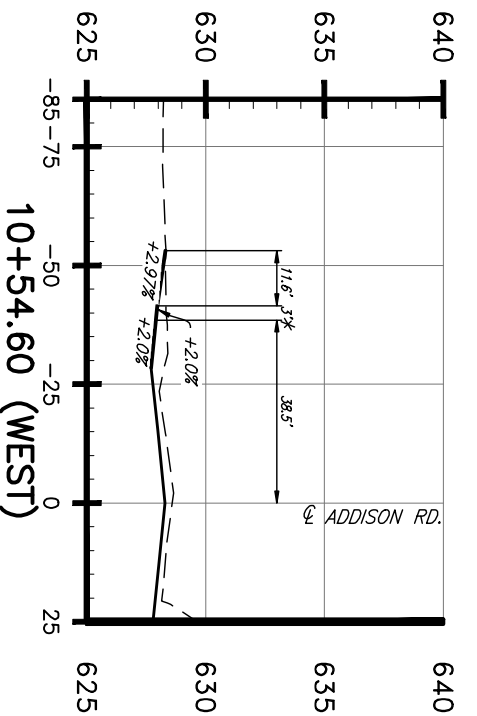
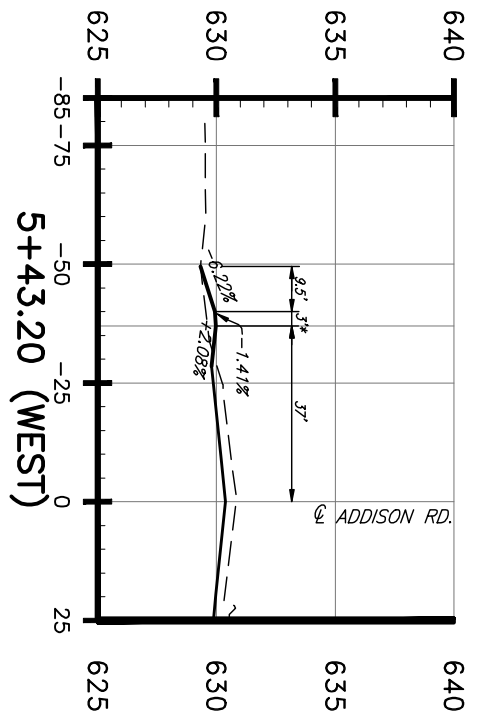
BELT LINE ROAD TO ARAPAHO ROAD PHASE 1

BIRKHOFF, HENDRICKS & CONWAY L. L. P.

CONSULTING ENGINEERS

DESIGNED BY: <u>J.W.B.</u>	PROJECT: <u>2002.102</u>	SHEET NO. <u>21</u>
DRAWN BY: <u>RLL</u>	DATE: <u>SEPTEMBER 2006</u>	OF <u>68</u> SHEETS

These plans and related specifications are for the use of the contractor only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



*SIDEWALK CROSSING AT DRIVEWAY:

BY J.W.B. DATE 05/04/2010

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE 1

CROSS SECTIONS AT DRIVEWAY CENTER LINE

BIRKHOFF, HENDRICKS & CONWAY L. L. P.

CONSULTING ENGINEERS

Dallas, Texas

DESIGNED BY: J.W.B.

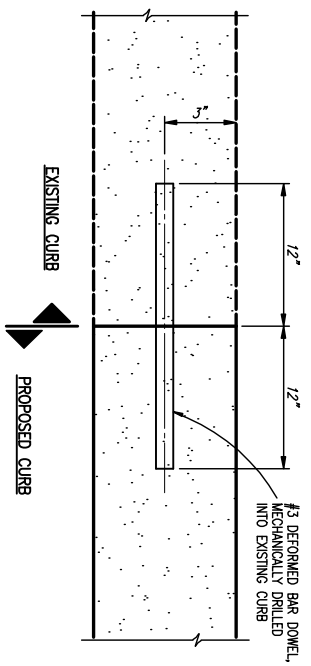
PROJECT: 2002 102

DATE: SEPTEMBER 2006

DRAWN BY: RAJL

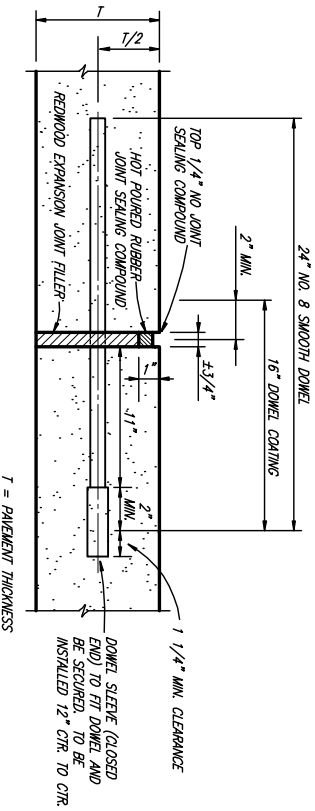
SHEET NO. 22

OF 88 SHEETS



CURB DOWEL DETAIL

NOT TO SCALE

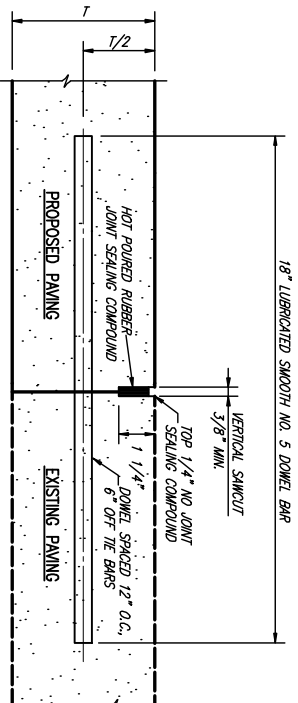


TRANSVERSE EXPANSION JOINT NOTES:

1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.
2. TRANSVERSE EXPANSION JOINTS SHALL BE SPACED AT 400 FT. MAXIMUM AND AT DRIVEWAY CONNECTIONS.

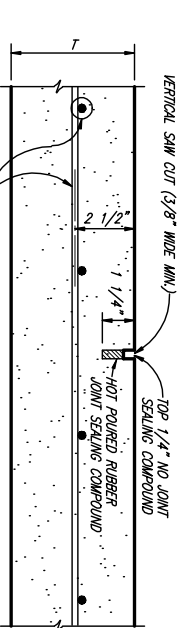
TRANSVERSE EXPANSION JOINT

NO SCALE



CONNECTION TO EXISTING PAVEMENT

NOT TO SCALE

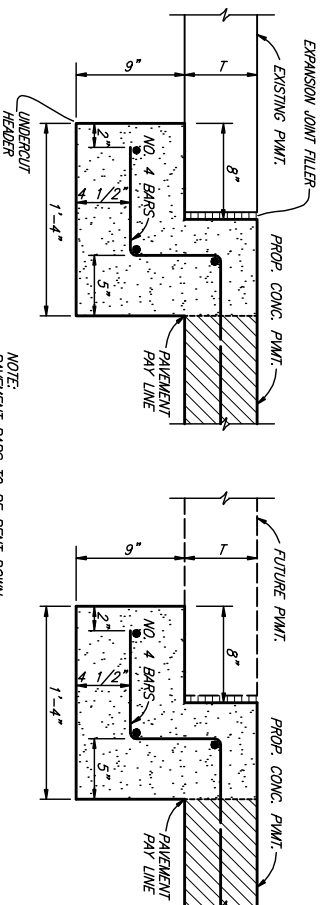


SAWED DUMMY JOINT

NO SCALE

GENERAL NOTES

1. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE EXISTING ASPHALT PAVEMENT, STRUCTURE, EXCAVATION, CONCRETE CURB & GUTTER, CONCRETE DRIVEWAYS AND CONCRETE SIDEWALK.
2. ALL CONCRETE TO BE REMOVED SHALL BE WITH FULL DEPTH SAW CUT. IF JOINT IS WITHIN 5 FEET OF TOWN OF ADDISON, REMOVAL SHALL BE WITH FULL DEPTH SAW CUT. FULL DETERMINATION TO BE MADE IN FIELD BY THE TOWN OF ADDISON.
3. CONTRACTOR SHALL PROTECT ALL UNDERGROUND UTILITIES DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL LAYOUT PROJECT BASED ON COORDINATES SHOWN IN THE PLANS.
5. CONCRETE PAVING SHALL BE 10 INCHES N.C.I.C.C.O.G. CLASS 7" MIN. SACKS/CY-5 MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS-3600 P.S.I. MAX. W/C RATIO-6.5 REINFORCING SHALL BE NO. 4 DEFORMED BARS ON 18 INCH CENTERS.
6. CONTRACTOR SHALL FURNISH AND PLACE SOLID SOD IN DISTURBED AREAS (NO PAY ITEM).
7. PAVEMENT BASE SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES AND COMPACTED TO 95% MODIFIED PROCTOR.
8. CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT 1/2 THE PROPOSED WIDTH AT A TIME.
9. CONSTRUCTION JOINTS SHALL HAVE A WELL FORMED KEY WAY OR BE A LONGITUDINAL BUTT JOINT.

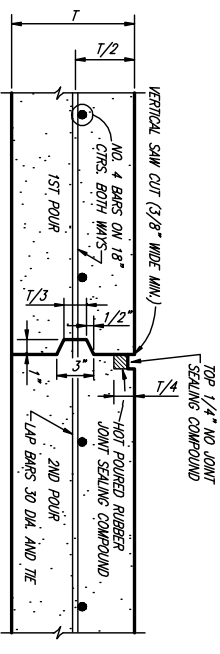


STREET HEADER

NO SCALE

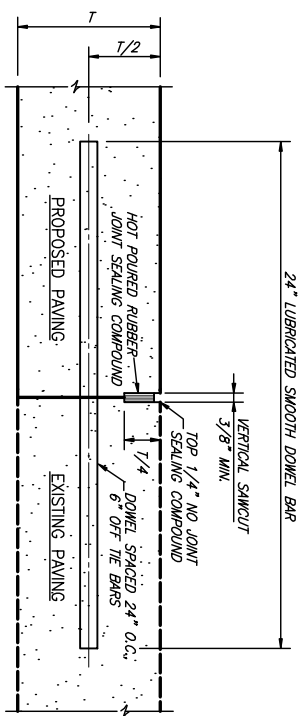
EXISTING PAVEMENT DETAIL

NO SCALE



CONSTRUCTION JOINT

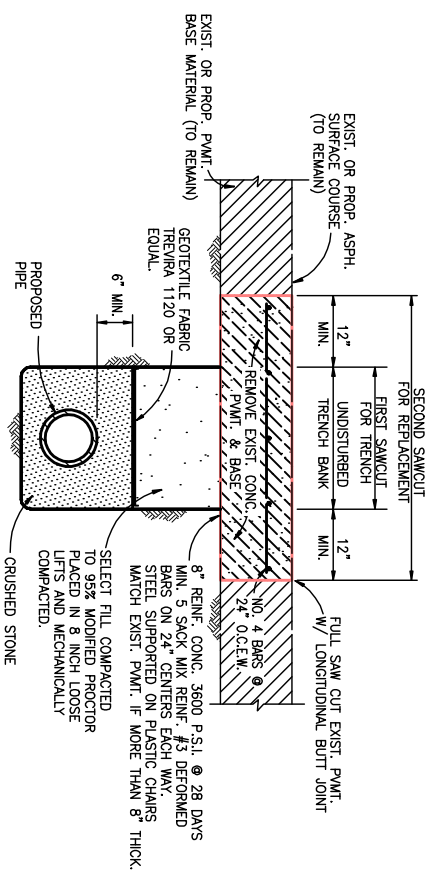
NO SCALE



LONGITUDINAL BUTT JOINT

NOT TO SCALE

1. 1'-8" AND GREATER NO. 6 BAR, 1'-6" AND LESS NO. 5 BAR HANGED (KEYWAY) JOINT AT CONTRACTOR'S OPTION.
2. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HANGED (KEYWAY) JOINT AT CONTRACTOR'S OPTION.
3. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG. HAND DRILLING NOT ACCEPTABLE. DAMAGE TO EXISTING PAVEMENT SHALL BE REMOVED BY CONTRACTOR AND JOINT CONSTRUCTED AT CONTRACTOR'S EXPENSE.
4. DOWEL BAR SHOWN IS IN ADDITION TO THE BARS (12" O.C.-6" OFF DOWELS).
5. THE BARS SHALL BE NO. 5 BAR DEFORMED. THE BAR SHALL HAVE A LENGTH OF 24 INCHES. THE BARS ARE REQUIRED TO BE DEFORMED.



CONCRETE STREET REPAIR

PIPE LINE CROSSING

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

By J.M.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE I

DETAILS

BIRKHOFF, HENDRICKS & CONWAY L L P.

CONSULTING ENGINEERS

Dallas, Texas

DESIGNED BY: J.M.B.

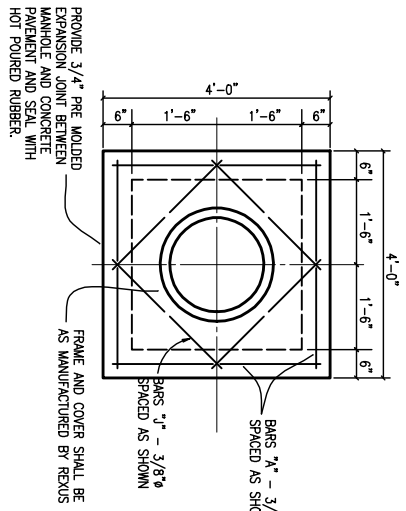
PROJECT: 2002 102

DATE: SEPTEMBER 2006

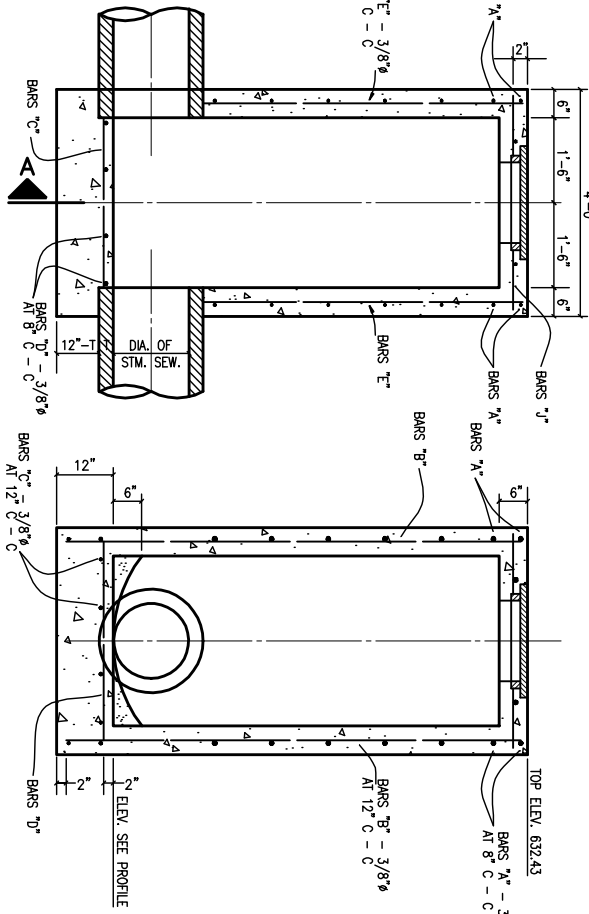
DRAWN BY: M.M.C.

SHEET NO. 24

OF 68 SHEETS

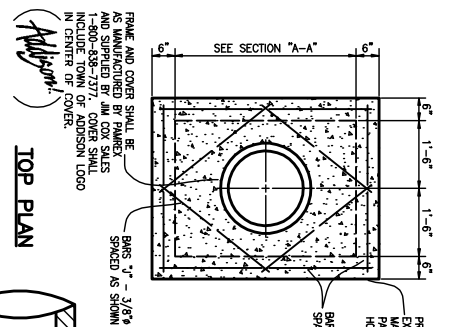


TOP PLAN

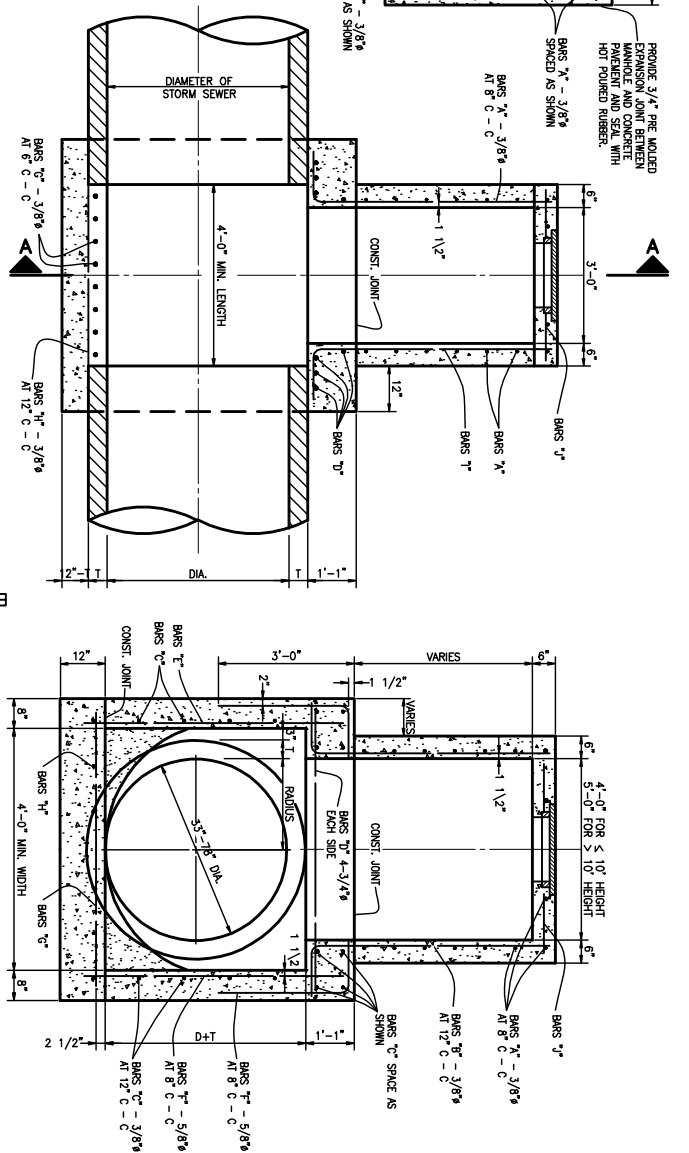


ELEVATION

SECTION A-A

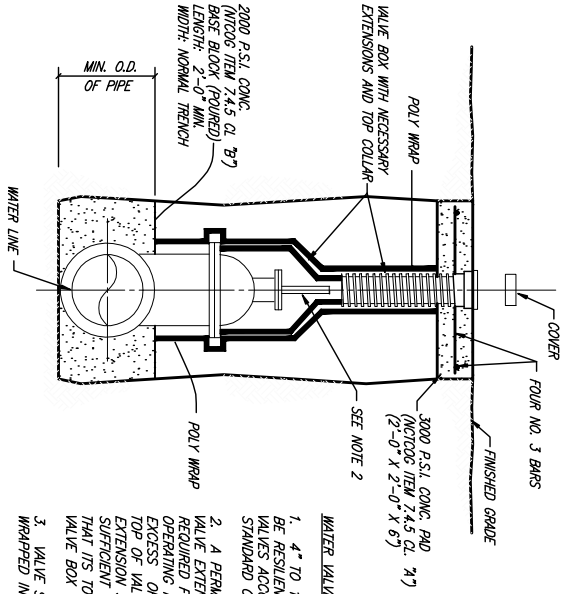


TOP PLAN



ELEVATION

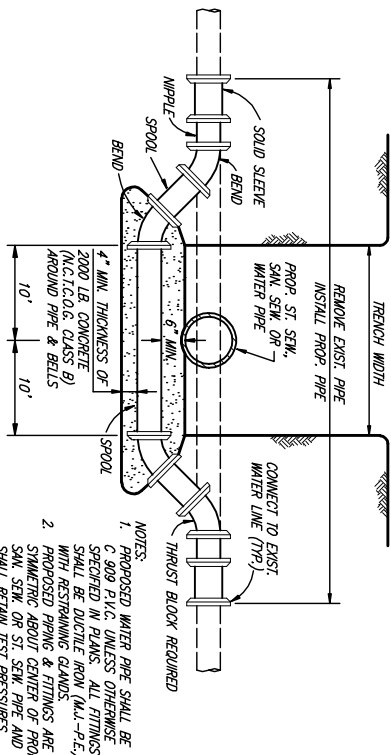
SECTION A-A



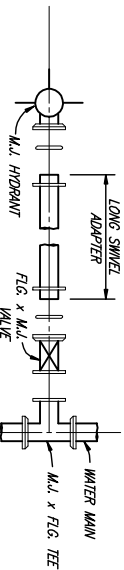
VALVE BOX PAD PLAN

VALVE SETTING & BOX

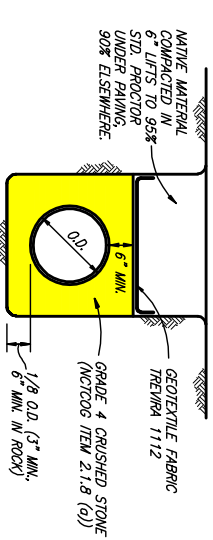
VALVE BOX WITH EXTENSION



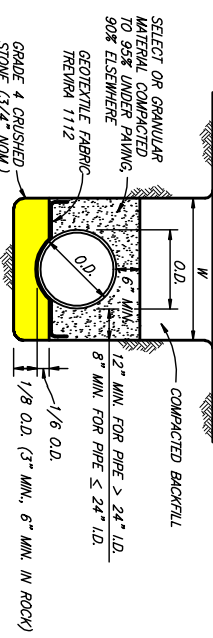
WATER MAIN LOWERING



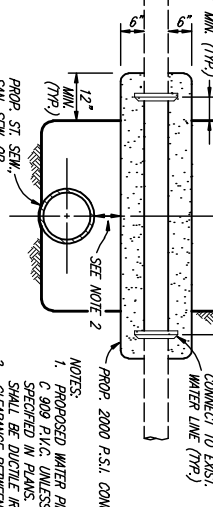
TYPICAL FIRE HYDRANT INSTALLATION



WATER & SANITARY SEWER EMBEDMENT



STORM SEWER PIPE EMBEDMENT



UTILITY SUPPORT

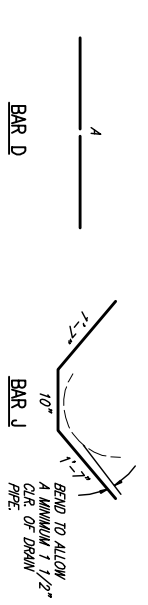
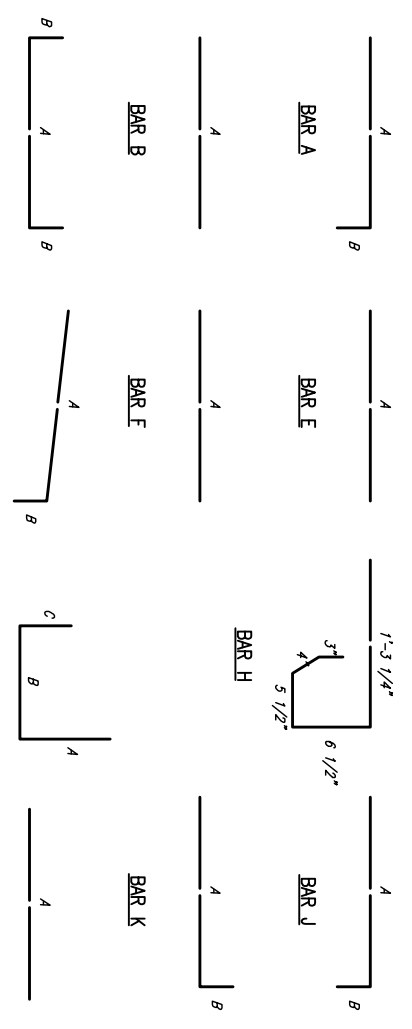
NOTES:
 1. PROPOSED WATER PIPE SHALL BE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.L.-P.E.) CLEARANCE BETWEEN TOP OF PROP. ST. SEW. OR ST. SEW. PIPE AND BOTTOM OF PROP. 2000 P.S.I. CONC. SHALL BE 24" (MIN.). IF LESS, THEN PROP. SEWER PIPE SHALL BE CONC. ENCASED ALSO.

THIS RECORD DRAWING IS A COMPILATION OF THE SEALED ENGINEERING DRAWING FOR THIS PROJECT, MODIFIED BY ADDITIONAL CHANGES AND INFORMATION FURNISHED BY THE CONTRACTOR. THE INFORMATION SHOWN ON THIS RECORD DRAWING IS NOT THE PROPERTY OF BIRKHOFF, HENDRICKS & CONWAY, L.L.P. THE DESIGN ENGINEER CANNOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THIS ORIGINAL SEALED DRAWING IS ON FILE AT THE OFFICES OF BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 BY: J.W.B. DATE: 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DESIGNED BY: J.W.B. PROJECT: 2002.102 SHEET NO. 25
 DRAWN BY: M.W.C. DATE: SEPTEMBER 2006 OF 88 SHEETS

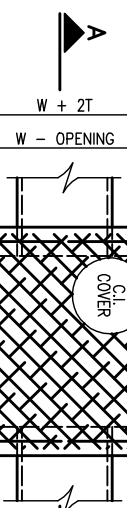
TOWN OF ADDISON, TEXAS
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
DETAILS
 BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas



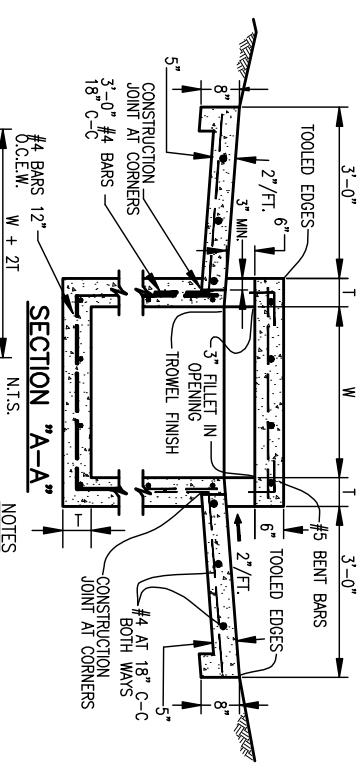
BAR DIAGRAMS

DOUBLE INLETS				DOUBLE INLETS					
DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS				DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS					
INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS	INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS
6 FT.	A	3	15	3'-2"	6 FT.	A	3	19	3'-2"
	B	3	2	11'-6"		B	3	2	15'-6"
	C	4	16	13'-4"		C	4	16	17'-4"
	D	4	9	4'-8"		D	4	9	4'-8"
	E	4	6	13'-4"		E	4	6	17'-4"
	F	4	5	1'-2"		F	4	5	1'-2"
	G	3	12	2'-0"		G	3	12	2'-0"
	H	3	28	*		H	3	28	*
	I	4	12	4'-8"		I	4	16	4'-8"
	J	5	1	*		J	5	1	*
	K	5	6	3'-2"		K	5	6	3'-2"
	L	4	11	3'-2"		L	4	11	3'-2"
	M	4	2	3'-0"		M	4	2	3'-0"
	N	4	2	4'-8"		N	4	2	4'-8"
7 FT.	A	3	17	3'-2"	10 FT.	A	3	23	3'-2"
	B	3	2	13'-6"		B	3	2	19'-6"
	C	4	16	15'-4"		C	4	16	21'-4"
	D	4	9	4'-8"		D	4	9	4'-8"
	E	4	6	15'-4"		E	4	6	21'-4"
	F	4	5	1'-2"		F	4	5	1'-2"
	G	3	15	2'-0"		G	3	15	2'-0"
	H	3	32	*		H	3	32	*
	I	4	14	4'-8"		I	4	20	4'-8"
	J	5	1	*		J	5	1	*
	K	5	6	3'-2"		K	5	6	3'-2"
	L	4	11	3'-2"		L	4	11	3'-2"
	M	4	2	3'-0"		M	4	2	3'-0"
	N	4	2	4'-8"		N	4	2	4'-8"

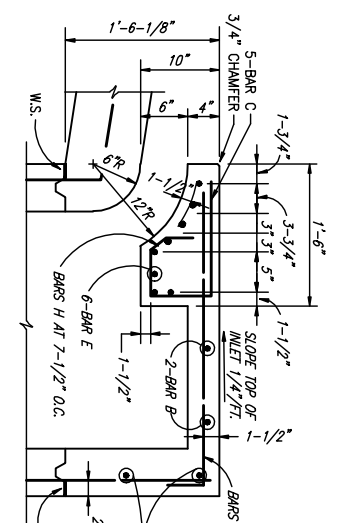
REINFORCING STEEL SCHEDULE



PLAN OF TOP SLAB



SECTION "A-A"



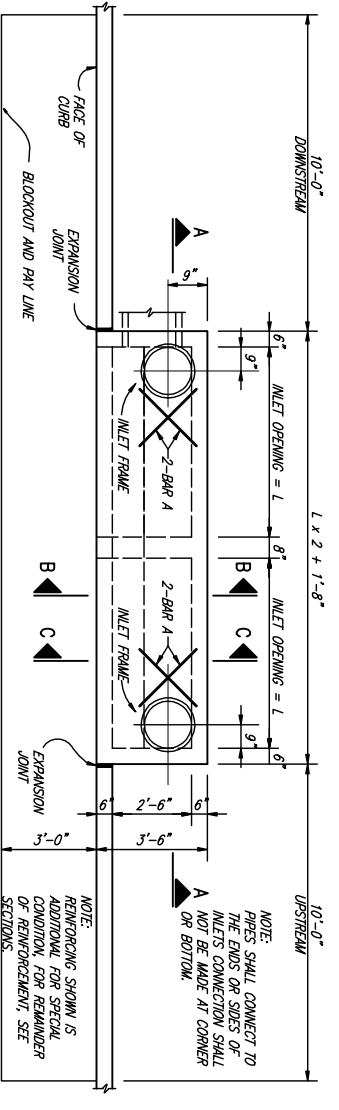
SECTION C-C

SECTION B-B

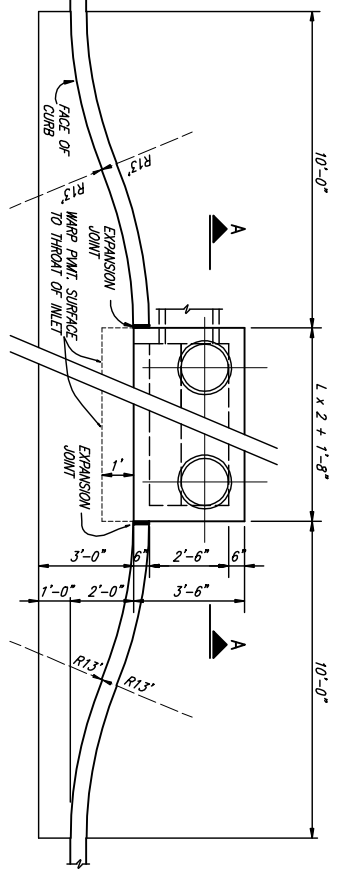
SECTION A-A

12, 14, 16 AND 20 FOOT INLETS

PLAN - STANDARD INLET



PLAN - RECESSED INLET



- NOTES**
1. MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF MCTCOC STANDARD SPECIFICATIONS FOR STANDARD CONCRETE MANHOLES, MINIMUM CLASS "A" CONCRETE.
 2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACES SHALL HAVE A COVER OF 2" TO THE CENTER BARS, UNLESS OTHERWISE NOTED.
 3. DEPTH OF DROP INLET FROM FINISHED GRADE TO FLOW LINE OF INLET IS VARIABLE. APPROXIMATE DEPTH WILL BE SHOWN ON PLANS AT LOCATION OF INLET.
 4. ALL STANDARD DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS OTHERWISE SHOWN ON PLANS.
 5. CASE IRON COVER SHALL INCLUDE TOWN OF ADDISON LOGO IN CENTER OF COVER.

INLET SIZE	T	W
2' SQUARE	7"	2'-0"
3' SQUARE	7"	3'-0"
4' SQUARE	7"	4'-0"
5' SQUARE	8"	5'-0"
6' SQUARE	8"	6'-0"

DROP INLET DETAILS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.P. Boudry

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO APARAH ROAD PHASE I

DETAILS

BIRKHOFF, HENDRICKS & CONWAY L.L.P.

CONSULTING ENGINEERS

Dallas, Texas

DESIGNED BY: J.M.B.

PROJECT: 2002.102

DATE: SEPTEMBER 2006

DRAWN BY: M.M.C.

DATE: SEPTEMBER 2006

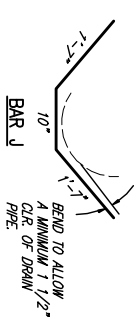
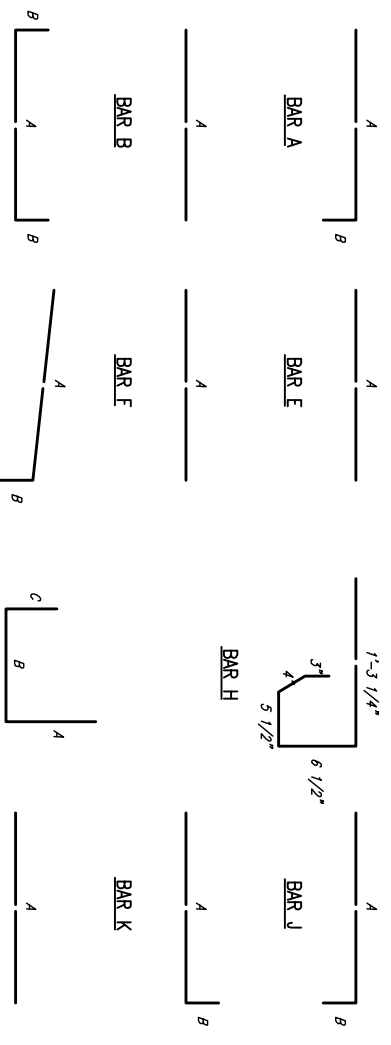
SHEET NO. 26

OF 68 SHEETS

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

These plans and related specifications were prepared for construction of this project. The design engineer's seal and written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



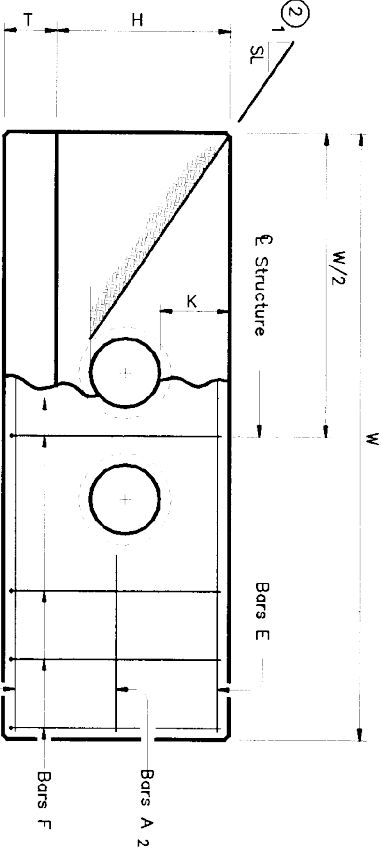
BAR DIAGRAMS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REVD	BAR DIMENSIONS		
				A	B	C
4 FT.	A	3	6	3'-2"	0'-3"	-
	B	3	1	2'-10"	-	-
	C	4	15	4'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	2'-0"	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
	A	3	12	3'-2"	0'-3"	-
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	3	3'-2"	3'-2"	3'-2"
	N	3	3	3'-2"	0'-3"	-
	A	3	3	3'-2"	3'-2"	3'-2"
	B	4	1			

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL

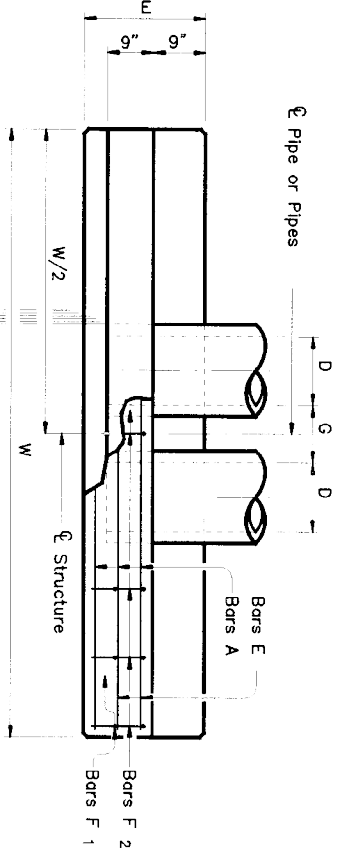
SLOPE	Values for one Pipe			Values to be added for each add'l Pipe		
	DIA OF PIPE, D	W	Reinf (lbs)	W	Reinf (lbs)	Conc (CY)
1:2"	9'-0"	122	1.1	1'-9"	15	0.2
1:5"	10'-3"	136	1.3	2'-2"	19	0.2
1:8"	11'-6"	163	1.5	2'-8"	16	0.3
2:1"	12'-9"	200	1.8	3'-1"	31	0.4
2:4"	14'-0"	217	2.1	3'-7"	34	0.4
2:7"	15'-3"	254	2.4	3'-11"	37	0.5
3:0"	16'-6"	272	2.7	4'-4"	40	0.6
3:3"	17'-9"	314	3.1	4'-8"	43	0.6
3:6"	19'-0"	371	3.9	5'-1"	46	0.8
4:2"	21'-6"	442	4.9	5'-10"	52	1.0
4:8"	25'-0"	569	6.4	6'-7"	59	1.3
5:4"	27'-6"	701	7.5	7'-6"	82	1.6
6:0"	30'-0"	794	8.8	8'-3"	90	1.8
6:6"	32'-6"	894	10.2	8'-9"	96	2.0
7:2"	35'-0"	1055	11.7	9'-4"	103	2.3
1:2"	13'-0"	175	1.6	1'-9"	14	0.2
1:5"	14'-9"	193	1.9	2'-2"	17	0.2
1:8"	16'-6"	228	2.2	2'-8"	19	0.3
2:1"	18'-3"	299	2.6	3'-1"	31	0.4
2:4"	20'-0"	323	3.0	3'-7"	33	0.4
2:7"	21'-9"	371	3.5	3'-11"	37	0.5
3:0"	23'-6"	415	4.0	4'-4"	40	0.5
3:3"	25'-3"	469	4.6	4'-8"	43	0.6
3:6"	27'-0"	556	5.7	5'-1"	46	0.8
4:2"	30'-6"	675	7.1	5'-10"	52	1.0
4:8"	35'-6"	837	9.2	6'-7"	59	1.3
5:4"	39'-0"	1015	11.0	7'-6"	84	1.6
6:0"	42'-6"	1171	12.9	8'-3"	91	1.8
6:6"	46'-0"	1298	14.9	8'-9"	98	2.0
7:2"	49'-6"	1561	17.1	9'-4"	103	2.3
1:2"	17'-0"	229	2.0	1'-9"	15	0.2
1:5"	19'-3"	266	2.4	2'-2"	17	0.2
1:8"	21'-6"	308	2.9	2'-8"	19	0.3
2:1"	23'-9"	382	3.5	3'-1"	31	0.3
2:4"	26'-0"	430	3.9	3'-7"	34	0.4
2:7"	28'-3"	486	4.7	3'-11"	37	0.5
3:0"	30'-6"	539	5.2	4'-4"	40	0.6
3:3"	32'-9"	603	6.0	4'-8"	42	0.6
3:6"	35'-0"	738	7.5	5'-1"	47	0.8
4:2"	39'-6"	881	9.3	5'-10"	52	1.0
4:8"	46'-0"	1102	12.1	6'-7"	61	1.3
5:4"	50'-6"	1364	14.4	7'-6"	84	1.6
6:0"	55'-0"	1547	16.9	8'-3"	91	1.8
6:6"	59'-6"	1741	19.5	8'-9"	98	2.0
7:2"	64'-0"	2069	22.4	9'-4"	102	2.3
1:2"	25'-0"	336	3.0	1'-9"	14	0.2
1:5"	28'-3"	384	3.6	2'-2"	17	0.2
1:8"	31'-6"	452	4.2	2'-8"	19	0.3
2:1"	34'-9"	581	5.1	3'-1"	31	0.4
2:4"	38'-0"	644	5.8	3'-7"	34	0.4
2:7"	41'-3"	737	6.9	3'-11"	37	0.5
3:0"	44'-6"	807	7.7	4'-4"	39	0.6
3:3"	47'-9"	912	8.9	4'-8"	44	0.6
3:6"	51'-0"	1108	11.0	5'-1"	48	0.8
4:2"	57'-6"	1318	13.7	5'-10"	54	1.0
4:8"	67'-0"	1674	17.9	6'-7"	59	1.3
5:4"	73'-6"	2064	21.3	7'-6"	83	1.6
6:0"	80'-0"	2343	24.9	8'-3"	89	1.8
6:6"	86'-6"	2635	28.9	8'-9"	96	2.0
7:2"	93'-0"	3123	33.1	9'-4"	101	2.3

① Quantities increase slightly for metal pipe installations.

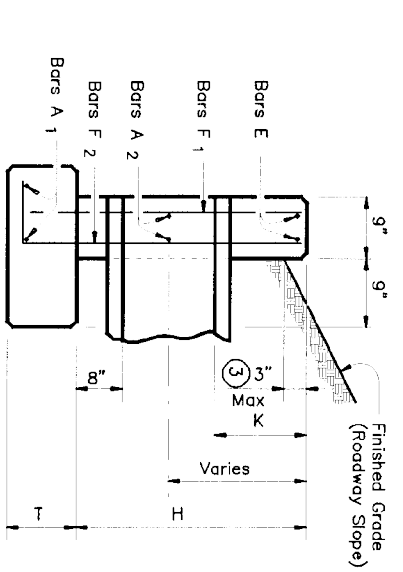


② Indicated slope is perpendicular to Q Pipe or Pipes

ELEVATION



PLAN OF NON-SKEWED PIPES



SECTION

③ For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.

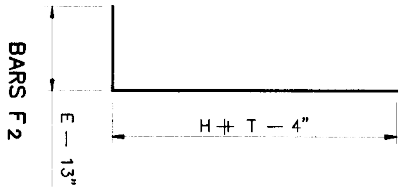
TABLE OF CONSTANT DIMENSIONS

DIA OF PIPE, D	G	K	H	T	E
12"	9"	1'-0"	2'-8"	9"	1'-9"
15"	11"	1'-0"	2'-11"	9"	1'-9"
18"	1'-2"	1'-0"	3'-2"	9"	1'-9"
21"	1'-4"	1'-0"	3'-5"	9"	2'-0"
24"	1'-7"	1'-0"	3'-8"	9"	2'-0"
27"	1'-8"	1'-0"	3'-11"	9"	2'-3"
30"	1'-10"	1'-0"	4'-2"	9"	2'-3"
33"	1'-11"	1'-0"	4'-5"	9"	2'-6"
36"	2'-1"	1'-0"	4'-8"	9"	2'-6"
42"	2'-4"	1'-0"	5'-2"	9"	2'-9"
48"	2'-7"	1'-0"	5'-11"	9"	3'-0"
54"	3'-0"	1'-3"	6'-5"	9"	3'-3"
60"	3'-3"	1'-3"	6'-11"	9"	3'-6"
66"	3'-6"	1'-3"	7'-5"	9"	3'-9"
72"	3'-9"	1'-3"	7'-11"	9"	4'-0"

TABLE OF REINFORCING STEEL

Bar	Size	Spd	No.
A1	# 5	~	2
A2	# 5	1'-6"	~
E	# 5	~	2
F	# 5	1'-0"	~

④ Quantities shown are for one structure end. (One headwall)



GENERAL NOTES:
 Designed according to current AASHTO Standard and Interim Specifications.
 Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.
 All reinforcing steel shall be Grade 60.
 All concrete shall be Class "C" and shall have a minimum 28 day compressive strength of 3600 psi.

TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 CH-PW-0 CONCRETE HEADWALL DETAIL**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas

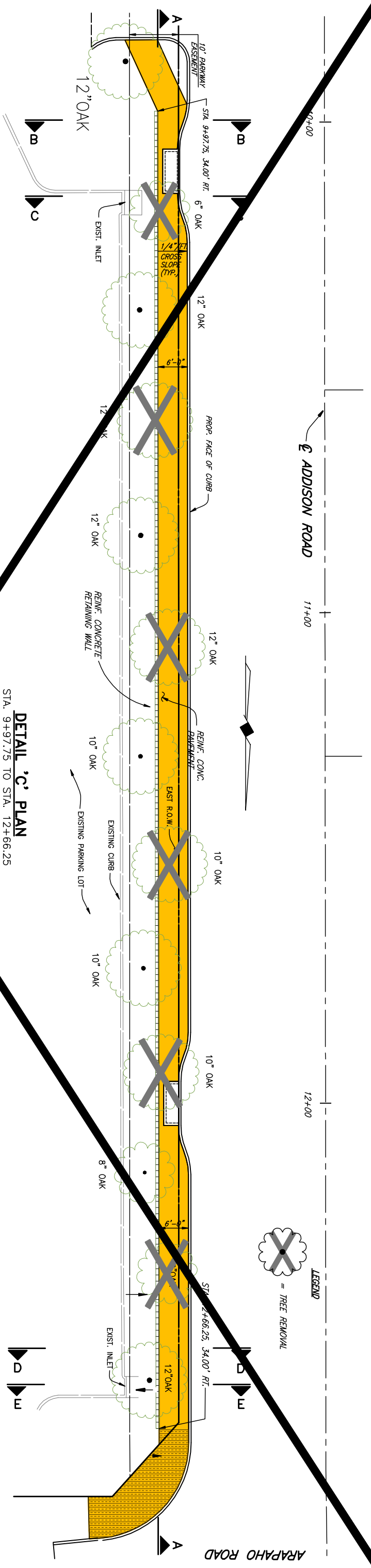
DESIGNED BY: J.W.B.
 DRAWN BY: R.A.L.
 PROJECT: 2002_102
 DATE: SEPTEMBER 2006
 SHEET NO. 28 OF 68 SHEETS



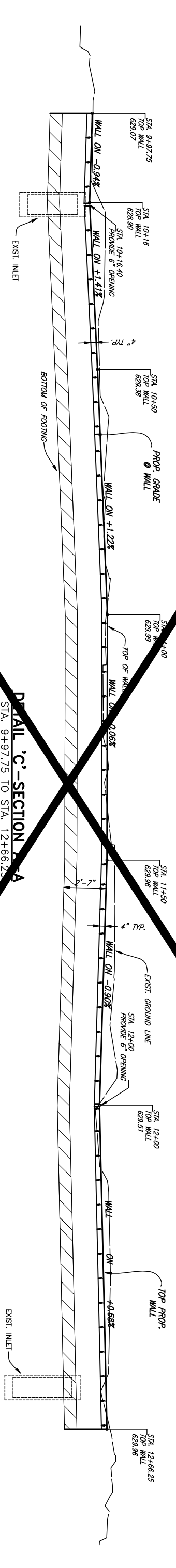
This record drawing is a completion of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

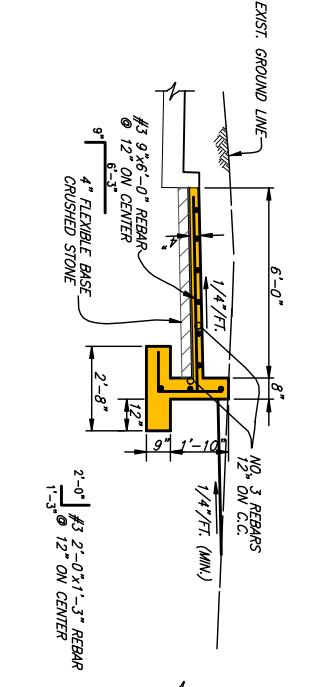
John W. Birkhoff
 DATE: 10/3/12/6



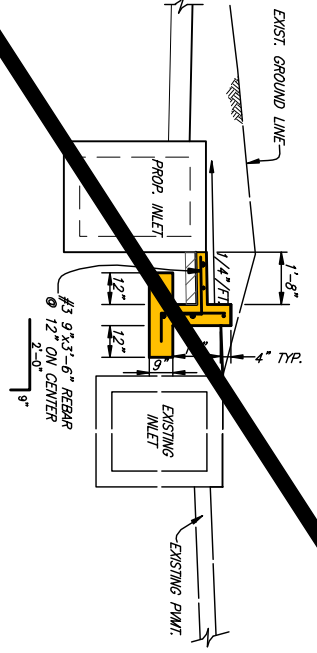
DETAIL 'C' PLAN
 STA. 9+97.75 TO STA. 12+66.25
 SCALE 1" = 10'



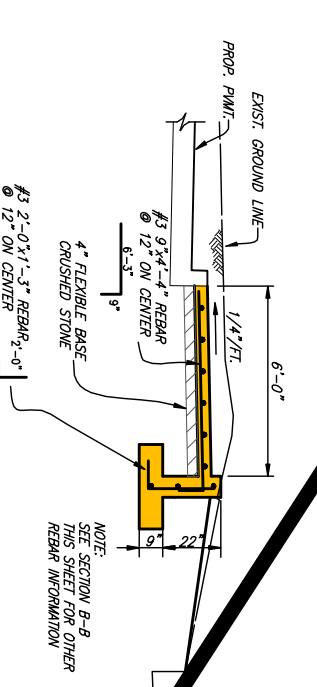
DETAIL 'C'-SECTION A
 STA. 9+97.75 TO STA. 12+66.25
 SCALE 1" = 10' HORIZ, 1" = 3' VERT.



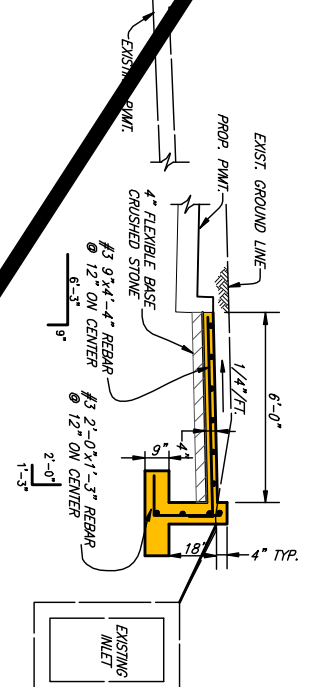
DETAIL 'C'-SECTION B-B
 STA. 9+97.75 TO STA. 12+66.25
 SCALE 1" = 3'



DETAIL 'C'-SECTION C-C
 STA. 9+97.75 TO STA. 12+66.25
 SCALE 1" = 3'



DETAIL 'C'-SECTION D-D
 STA. 9+97.75 TO STA. 12+66.25
 SCALE 1" = 3'

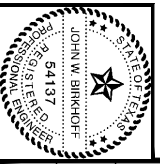


DETAIL 'C'-SECTION E-E
 STA. 9+97.75 TO STA. 12+66.25
 SCALE 1" = 3'

DELETE THIS SHEET

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy, or completeness. This original sealed drawings are on file at the office of Birkhoff, Hendricks & Conway, L.L.P. BY: J.W.B. DATE: 08/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES. *[Signature]* DATE: 10/31/06



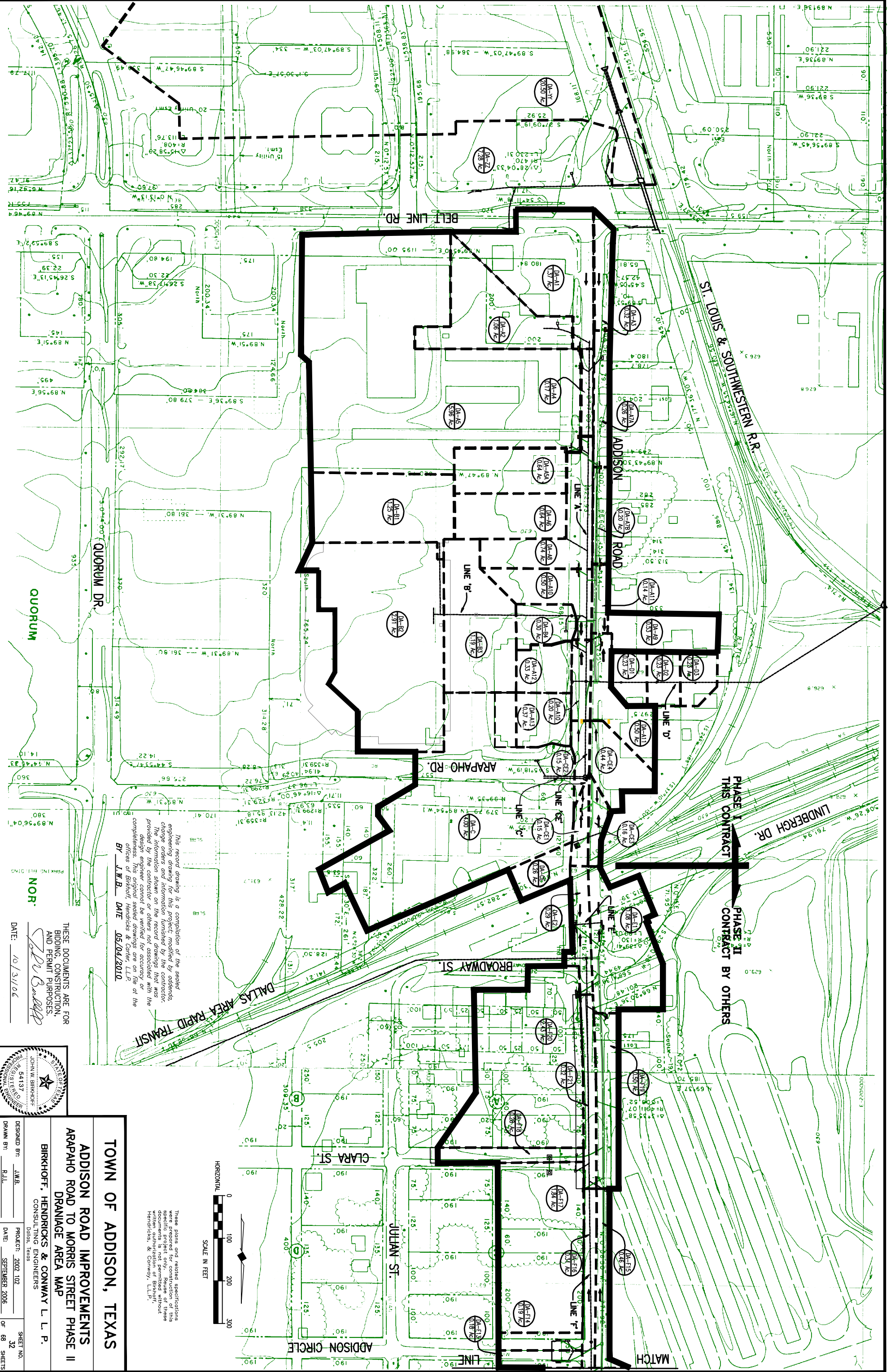
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 RETAINING WALL DETAILS

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 DALLAS, TEXAS

DESIGNED BY: J.W.B.
 DRAWN BY: RALL
 PROJECT: 2002.102
 DATE: SEPTEMBER 2006
 SHEET NO. OF 68 SHEETS

These plans and related specifications are subject to the contract documents. Use of these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY: J.K.B. DATE: 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

ARAPAHO ROAD TO MORRIS STREET PHASE II

DRAINAGE AREA MAP

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: JMB.
 DRAWN BY: RLL

PROJECT: 2002 102
 DATE: SEPTEMBER 2006

SHEET NO. 32
 OF 68 SHEETS

These points and related specifications were prepared for construction of this specific project only. Reuse of these written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

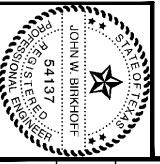
RUNOFF CALCULATIONS - BELT LINE ROAD TO ARAPAHO ROAD

AREA NUM.	AREA (AC.)	RUNOFF COEFF. "C"	DESIGN STORM FREQ. (YEAR)	TIME OF CONC. (MIN.)	INTENSITY (IN./HR.)	Q= CIA (C.F.S.)	REMARKS
A1	1.37	0.90	100	10.00	8.74	10.78	Commercial / Retail
A2	1.06	0.90	100	10.00	8.74	8.34	Commercial / Retail
A3	0.32	0.90	100	10.00	8.74	2.52	Commercial / Retail
A4	0.17	0.90	100	10.00	8.74	1.34	Commercial / Retail
A5	5.96	0.90	100	10.00	8.74	46.88	Commercial / Retail
A5A	0.64	0.90	100	10.00	8.74	5.03	Commercial / Retail
A6	0.64	0.90	100	10.00	8.74	5.03	Commercial / Retail
A7A	0.26	0.90	100	10.00	8.74	2.05	Commercial / Retail
A7B	0.20	0.90	100	10.00	8.74	1.57	Commercial / Retail
A8	0.74	0.90	100	10.00	8.74	5.82	Commercial / Retail
A9	0.53	0.90	100	10.00	8.74	4.17	Commercial / Retail
A10	0.70	0.90	100	10.00	8.74	5.51	Commercial / Retail
A11	0.64	0.90	100	10.00	8.74	5.03	Commercial / Retail
A12	0.33	0.90	100	10.00	8.74	2.60	Commercial / Retail
A13	0.37	0.90	100	10.00	8.74	2.91	Commercial / Retail
B1	1.25	0.90	100	10.00	8.74	9.83	Commercial / Retail
B2	2.91	0.90	100	10.00	8.74	22.89	Commercial / Retail
B3	1.19	0.90	100	10.00	8.74	9.36	Commercial / Retail
B4	0.30	0.90	100	10.00	8.74	2.36	Commercial / Retail
C1	4.00	0.90	100	10.00	8.74	31.46	Commercial / Retail
CE1	0.15	0.90	100	10.00	8.74	1.18	Commercial / Retail
CE2	0.15	0.90	100	10.00	8.74	1.18	Commercial / Retail
CE3	0.16	0.90	100	10.00	8.74	1.26	Commercial / Retail
CE4	0.44	0.90	100	10.00	8.74	3.46	Commercial / Retail
D1	0.23	0.90	100	10.00	8.74	1.81	Commercial / Retail
D2	0.23	0.90	100	10.00	8.74	1.81	Commercial / Retail
D3	0.23	0.90	100	10.00	8.74	1.81	Commercial / Retail
CE	0.26	0.90	100	10.00	8.74	2.05	Commercial / Retail

This record drawing is a completion of the sealed engineering drawing for this project, modified by additions, change orders and omissions. The design engineer shall be responsible for the accuracy of the information presented by the contractor. The contractor shall be responsible for the accuracy of the information presented by the contractor. The design engineer shall not be responsible for the accuracy of the information presented by the contractor.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES. *J.W.B.* DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
RUNOFF CALCULATIONS

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
DALLAS, TEXAS

DESIGNED BY: J.W.B. PROJECT: 2002_102 SHEET NO. 33
DRAWN BY: R.L.L. DATE: SEPTEMBER 2006 OF 88 SHEETS

These plans and related specifications are for informational purposes only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

STORM SEWER LINES "A,B,C & D" STORM SEWER CALCULATIONS

Upstream Station	Downstream Station	Distance Between Collection Points	Area No.	Drainage Area (Ac.)	Runoff Coeff. "C"	Incrmen- ential "CA"	Accum- ulated "CA"	Time at Upstream Station (MIN.)	Design Storm Freq. (Yrs.)	Intensity (I) (in./hr.)	Runoff (Q) (cfs.)	Slope of Hydraulic Gradient (Ft./Ft.)	No. of Pipes	Selected Storm Sewer Size	Velocity Between Points (f.p.s.)	Head Loss Coeff. "K"	Velocity Upstream (feet)	Flow Time Distance/ (Vel*60) (Min.)	Time at Downstream Station (Min.)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Existing Line A With/ Prop. Parallel Line A1																				
784.55	720.06	64.49	A2	1.06	0.90	0.95	0.95	10.00	100	8.74	8.34	0.0004	1	30	1.70	1	0.00	0.63	10.63	
720.06	717.50	2.56	A3	0.32	0.90	0.29	1.24	10.63	100	8.66	10.76	0.0007	1	30	2.19	1	0.07	0.02	10.65	
717.50	554.79	162.71	A1	1.37	0.90	1.23	2.48	10.65	100	8.65	21.41	0.0027	1	30	4.36	1	0.25	0.62	11.27	
554.79	528.88	27.91	A4	0.17	0.90	0.15	2.63	11.27	100	8.45	22.21	0.0029	1	30	4.52	1	0.02	0.10	11.39	
528.88	294.11	232.77	A5 & A5A	3.60	0.90	3.24	5.87	11.38	100	8.42	49.41	0.0024	1	42	5.14	1	0.09	0.76	12.13	3.00 Ac. To Prop. A1
294.11	242.72	51.39	A6	0.24	0.90	0.22	6.08	12.13	100	8.18	49.77	0.0012	1	48	3.96	1	0.00	0.22	12.35	0.40 Ac. To Prop. A1
242.72	147.84	94.88	A8	0.34	0.90	0.31	6.39	12.35	100	8.15	52.08	0.0013	1	48	4.14	1	0.02	0.39	12.73	0.40 Ac. To Prop. A1
147.84	80.51	67.33	LINE B	2.65	0.90	2.39	8.78	12.73	100	8.06	70.73	0.0024	1	48	5.63	1	0.23	0.20	12.93	3.00 Ac. To Prop. A1
80.51	67.01	13.50	A10	0.70	0.90	0.63	9.41	12.93	100	8.02	75.43	0.0028	1	48	6.00	1	0.07	0.04	12.97	
67.01	0.00	67.01	A12	0.33	0.90	0.30	9.70	12.97	100	8.01	77.71	0.0029	1	48	6.18	1	0.03	0.18	13.15	
Proposed Line A1																				
512.75	495.18	17.57	A5 & A5A	3.00	0.90	2.70	2.70	10.00	100	8.74	23.80	0.0020	1	33	3.97	1	0.00	0.07	10.07	
495.18	284.23	230.95	A7A	0.26	0.90	0.23	2.93	10.07	100	8.70	25.53	0.0023	1	33	4.30	1	0.29	0.90	10.97	
284.23	240.42	23.81	A7B	0.20	0.90	0.18	3.11	10.97	100	8.42	26.22	0.0015	1	36	3.71	1	0.00	0.11	11.08	
240.42	144.00	96.42	A6 & A6	0.80	0.90	0.72	3.83	11.08	100	8.40	32.21	0.0023	1	36	4.56	1	0.11	0.35	11.43	
144.00	103.77	40.23	LINE B	3.00	0.90	2.70	6.53	11.43	100	8.30	54.23	0.0014	1	48	4.32	1	0.00	0.16	11.58	
103.77	89.32	14.45	A9	0.53	0.90	0.48	7.01	11.58	100	8.27	57.98	0.0016	1	48	4.61	1	0.04	0.05	11.64	
89.32	0.00	89.32	A11	0.64	0.90	0.58	7.59	11.64	100	8.25	62.59	0.0014	1	51	4.41	1	0.00	0.34	11.97	
Existing Line C & Proposed Line CE																				
398.00	288.27	109.73	CE	0.26	0.90	0.23	0.23	10.00	100	8.74	2.05	0.0002	1	21	0.85	1	0.00	2.15	12.15	
288.27	282.14	6.13	CE1	0.15	0.90	0.14	0.37	12.15	100	8.12	3.00	0.0002	1	24	0.95	1	0.01	0.11	12.26	
282.14	228.93	55.21	CE3	0.16	0.90	0.14	0.51	12.26	100	8.09	4.15	0.0003	1	24	1.32	1	0.02	0.70	12.95	
228.93	78.22	148.71	C	4.00	0.90	3.80	4.11	12.95	100	7.94	32.66	0.0083	1	30	6.65	1	0.67	0.37	13.33	
78.22	72.50	5.72	CE2	0.15	0.90	0.14	4.25	13.33	100	7.85	33.35	0.0025	1	36	4.72	1	0.32	0.02	13.35	
72.50	0.00	72.50	CE4	0.44	0.90	0.40	4.64	13.35	100	7.84	36.41	0.0030	1	36	5.15	1	0.00	0.23	13.58	
Existing Line D																				
749.90	667.30	82.60	A, A13, C&CE	24.67	0.90	22.20	21.97	12.21	100	8.10	177.96	0.0047	1	60	9.06	1	0.00	0.15	12.36	
667.30	584.50	82.70	D1	0.23	0.90	0.21	22.41	12.36	100	8.07	180.85	0.0048	1	60	9.21	1	0.04	0.15	12.51	
584.50	493.50	91.10	D2	0.23	0.90	0.21	22.82	12.51	100	8.06	182.29	0.0049	1	60	9.28	1	0.02	0.16	12.68	
493.50	0.00	493.50	D3	0.23	0.90	0.21	22.82	12.68	100	8.05	183.73	0.0050	1	60	9.36	1	0.02	0.88	13.55	

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing are on file at the offices of Birkhoff, Hendricks & Conway, LLP.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DATE: 10/31/06



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS BELT LINE ROAD TO ARAPAHO ROAD PHASE I STORM SEWER CALCULATIONS

BIRKHOFF, HENDRICKS & CONWAY L L P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.W.B. PROJECT: 2002 102 SHEET NO. 34
DRAWN BY: R.L.L. DATE: SEPTEMBER 2006 OF 68 SHEETS

These plans and related specifications were prepared for construction of this project. The engineer's responsibility is limited to the design and construction of the storm sewer system shown on these plans. The engineer does not assume any liability for the design or construction of any other part of the project.

INLET CALCULATIONS

Runoff Calculations														Gutter Capacity Calculations				Curb Inlet Calculations (Type I)					Remarks				
Inlet Number	Area No.	Roadway Center Line Station	Paved Area (Ac.) C=0.90	Offsite Area (Ac.) C=0.90	Effective Runoff Coeff. "C"	Incremental "CA"	Accumulated "CA"	Time Upstr. Sta. (Min.)	Design Storm Freq. (Yrs.)	Intensity (I) (In./Hr.)	Flow "Q" (c.f.s.)	Carry Over (c.f.s.)	Total Flow "Qa" (c.f.s.)	Z	Z/N	Gutter Slope "S" (ft./ft.)	Y Depth of Flow in Gutter (ft.)	a (ft.)	ql (c.f.s.)	Minimum Length Required Lr (ft.)	Length Supplied La (ft.)	La/Lr	a/Y	Q/Qa	Qc=Qa*(Q/Qa)	Carryover (c.f.s.)	Remarks
A1	A1	3+28.29 - 29.62 RT.	1.37	0.00	0.90	1.23	1.23	10.00	100	8.74	10.78	0.00	10.78	48.0	3200	0.00050	0.40	0.42	1.60	6.76	8.00	1.18	1.06	1.18	12.76	0.00	8 ft. Recessed Inlet On Grade
A2	A2	2+64.5 - 65.1 RT.	1.06	0.00	0.90	0.95	0.95	10.00	100	8.74	8.34	0.00	8.34	48.0	3200	0.00050	0.36	0.42	1.49	5.60	8.00	1.43	1.17	1.43	11.92	0.00	Existing 2'x2' Drop Inlet By Others
A3	A3	2+90.34 - 35.31 LT.	0.32	0.00	0.90	0.29	0.29	10.00	100	8.74	2.52	0.00	2.52	48.0	3200	0.00050	0.23	0.42	1.13	2.22	8.00	3.60	1.83	3.60	9.06	0.00	8 ft. Recessed Inlet On Grade
A4	A4	5+33.89 - 30.50 RT.	0.17	0.00	0.90	0.15	0.15	10.00	100	8.74	1.34	0.00	1.34	48.0	3200	0.00050	0.18	0.42	1.01	1.33	8.00	6.03	2.31	6.03	8.06	0.00	8 ft. Recessed Inlet On Grade
A5	A5	5+52.75 - 47.83 RT.	5.96	0.00	0.90	5.36	5.36	10.00	100	8.74	46.88	0.00	46.88	0.0	0	0.4417	0.00	0.00	0.00	0.00	2.75	0.00	0.00	0.00	0.00	0.00	16 ft. Standard Inlet Low Pt.
A5A	A5A	5+67.65 - 61.96 RT.	0.64	0.00	0.90	0.58	0.58	10.00	100	8.74	5.03	0.00	5.03	48.0	3200	0.00050	0.30	0.42	1.32	3.83	5.00	1.31	1.41	1.31	6.58	0.00	Exist. 5 ft. Standard Inlet Low Pt.
A6	A6	7+69.49 - 60.83 RT.	0.64	0.00	0.90	0.58	0.58	10.00	100	8.74	5.03	0.00	5.03	48.0	3200	0.00050	0.30	0.42	1.32	3.83	5.00	1.31	1.41	1.31	6.58	0.00	Exist. 5 ft. Standard Inlet Low Pt.
A7A	A7A	6+05 - 30.50 LT.	0.26	0.00	0.90	0.23	0.23	10.00	100	8.74	2.05	0.00	2.05	48.0	3200	0.00050	0.21	0.42	1.09	1.88	6.00	3.19	1.97	3.19	6.53	0.00	6 ft. Recessed Inlet On Grade
A7B	A7B	8+35.94 - 30.50 LT.	0.20	0.00	0.90	0.18	0.18	10.00	100	8.74	1.57	0.00	1.57	48.0	3200	0.00050	0.19	0.42	1.04	1.52	6.00	3.95	2.18	3.95	6.22	0.00	6 ft. Recessed Inlet On Grade
A8	A8	8+55.61 - 30.50 RT.	0.74	0.00	0.90	0.67	0.67	10.00	100	8.74	5.82	0.00	5.82	48.0	3200	0.00050	0.32	0.42	1.36	4.27	10.00	2.34	1.33	2.34	13.62	0.00	10 ft. Recessed Inlet On Grade
A9	A9	9+91.07 - 42.65 RT.	0.53	0.00	0.90	0.48	0.48	10.00	100	8.74	4.17	0.00	4.17	48.0	3200	0.00050	0.28	0.42	1.26	3.31	5.00	1.51	1.51	1.51	6.30	0.00	Exist. 5 ft. Standard Inlet Low Pt.
A10	A10	10+10 - 30.50 RT.	0.50	0.00	0.90	0.45	0.45	10.00	100	8.74	3.93	0.00	3.93	48.0	3200	0.00050	0.27	0.42	1.24	3.16	8.00	2.53	1.54	2.53	9.95	0.00	8 ft. Recessed Inlet Low Pt.
A10	A10	10+10 - 30.50 RT.	0.20	0.00	0.90	0.18	0.18	10.00	100	8.74	1.57	0.00	1.57	48.0	3200	0.00066	0.18	0.42	1.01	1.55	8.00	5.15	2.29	5.15	8.10	0.00	8 ft. Recessed Inlet Low Pt.
A11	A11	10+10 - 30.50 LT.	0.14	0.00	0.90	0.13	0.13	10.00	100	8.74	1.10	0.00	1.10	48.0	3200	0.00066	0.16	0.42	0.95	1.15	8.00	6.94	2.62	6.94	7.64	0.00	8 ft. Recessed Inlet Low Pt.
A11	A11	10+10 - 30.50 LT.	0.50	0.00	0.90	0.45	0.45	10.00	100	8.74	3.93	0.00	3.93	48.0	3200	0.00066	0.26	0.42	1.21	3.26	8.00	2.45	1.63	2.45	9.65	0.00	8 ft. Recessed Inlet Low Pt.
A12	A12	10+16.37 - 41.75 RT.	0.33	0.00	0.90	0.30	0.30	10.00	100	8.74	2.60	0.00	2.60	48.0	3200	0.00050	0.23	0.42	1.14	2.28	4.00	1.76	1.80	1.76	4.56	0.00	Exist. 4 ft. Standard Inlet Low Pt.
A13	A13	12+57.80 - 41.72 RT.	0.37	0.00	0.90	0.33	0.33	10.00	100	8.74	2.91	0.00	2.91	48.0	3200	0.00050	0.24	0.42	1.17	2.50	3.00	1.20	1.73	1.20	3.50	0.00	Exist. 3 ft. Standard Inlet Low Pt.
CE1	CE1	14+08 - 30.50 RT.	0.15	0.00	0.90	0.14	0.14	10.00	100	8.74	1.18	0.00	1.18	48.0	3200	0.00066	0.16	0.42	0.97	1.22	6.00	4.91	2.56	4.91	5.79	0.00	6 ft. Recessed Inlet On Grade
CE2	CE2	12+00 - 30.50 RT.	0.15	0.00	0.90	0.14	0.14	10.00	100	8.74	1.18	0.00	1.18	48.0	3200	0.00066	0.16	0.42	0.97	1.22	8.00	6.54	2.56	6.54	7.72	0.00	8 ft. Recessed Inlet Low Pt.
CE3	CE3	14+01.60 - 30.50 LT.	0.16	0.00	0.90	0.14	0.14	10.00	100	8.74	1.26	0.00	1.26	48.0	3200	0.00066	0.17	0.42	0.98	1.29	6.00	4.65	2.49	4.65	5.85	0.00	6 ft. Recessed Inlet On Grade
CE4	CE4	12+00 - 30.50 LT.	0.44	0.00	0.90	0.40	0.40	10.00	100	8.74	3.46	0.00	3.46	48.0	3200	0.00066	0.25	0.42	1.17	2.95	8.00	2.72	1.71	2.72	9.40	0.00	8 ft. Recessed Inlet Low Pt.
CE	CE	14+91.47 - 41.31 RT.	0.26	0.00	0.90	0.23	0.23	10.00	100	8.74	2.05	0.00	2.05	48.0	3200	0.3333	0.10	0.75	1.68	1.21	12.00	9.88	7.75	9.88	20.21	0.00	3 ft. x 3 ft. Drop Inlet Low Pt.

These plans and related specifications were prepared by the undersigned engineer in accordance with the standards of the State of Texas. The engineer is not permitted to reuse or reproduce these documents without the written consent of Birkhoff, Hendricks, & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

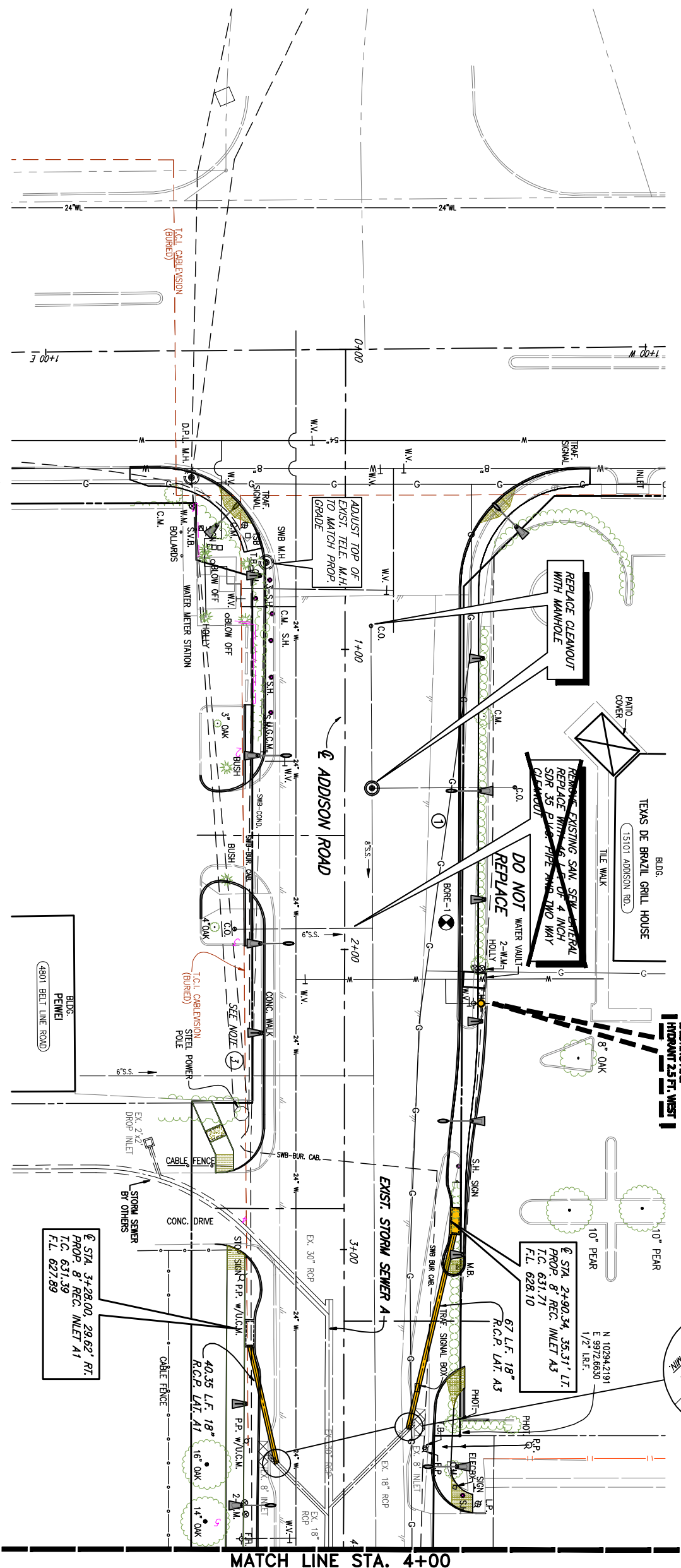
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO APAPHO ROAD PHASE I
INLET DATA

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas



THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
DATE: _____

DESIGNED BY: JMB
DRAWN BY: RLL
PROJECT: 2002 102
DATE: SEPTEMBER 2006
SHEET NO. 35 OF 68 SHEETS



WARNING
ONCOR ELECTRICAL CONDUIT CALL 1-800-DIG-TESS 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

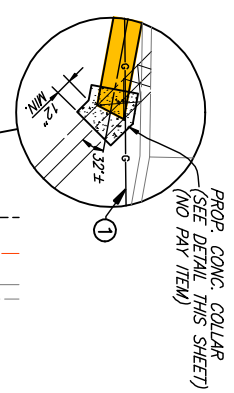
WARNING
ONCOR GAS LINE CALL 1-800-DIG-TESS 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

WARNING
THE BURIED CABLE CALL 1-800-DIG-TESS 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

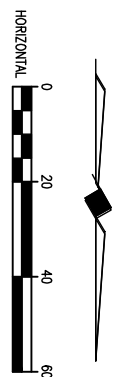
WARNING
S.W. BURIED TELEPHONE CABLE CALL 1-800-DIG-TESS 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

CALL US BEFORE YOU DIG

REMOVE & RELOCATE EXISTING FIRE HYDRANT 2.5 FT. WEST



PROP. CONC. COLLAR (SEE DETAIL THIS SHEET) (NO PAY ITEM)



HORIZONTAL SCALE IN FEET

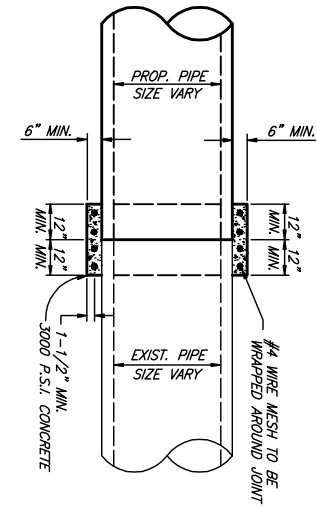
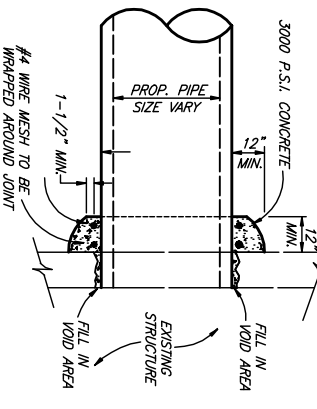
- BM#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF INWOOD RD. ELEV. 630.39
- T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80
- T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD., STA. 9+87.52 FEET RT. ELEV. 628.79

INLET REFERENCE POINT

EXISTING STORM SEWER PIPE REMOVAL

- NOTES:**
- 1) CONNECTING TO EXISTING STORM SEWER & REMOVAL OF EXISTING STORM SEWER PIPE, INLETS AND OTHER APPURTENANCES IS SUBSIDIARY TO PROPOSED STORM SEWER SYSTEM INSTALLATION.
 - 2) USED 1978 ADDISON ROAD AND KELLER SPARKS CONSTRUCTION PLANS TO SHOW APPROXIMATE LOCATION AND DEPTH OF EXISTING STORM SEWER SHOWN IN THE PLANS, ALONG WITH LOCATING AND MEASURING THE DEPTH OF EXISTING STORM SEWER STRUCTURES.
 - 3) POSITIVE FLOW FROM EXIST. FLUME SHALL BE MAINTAINED.

These plans and related specifications were prepared for construction of this project. The information shown on these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



DETAIL OF PIPE CONNECTION W/ EXISTING PIPE OR STRUCTURE

INSIDE JOINT SHALL BE CONCRETE MORTAR IF PIPE SIZES ARE DIFFERENT

FIELD CHANGE NO. 1 MARCH 22, 2007

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 3/22/07



TOWN OF ADDISON, TEXAS

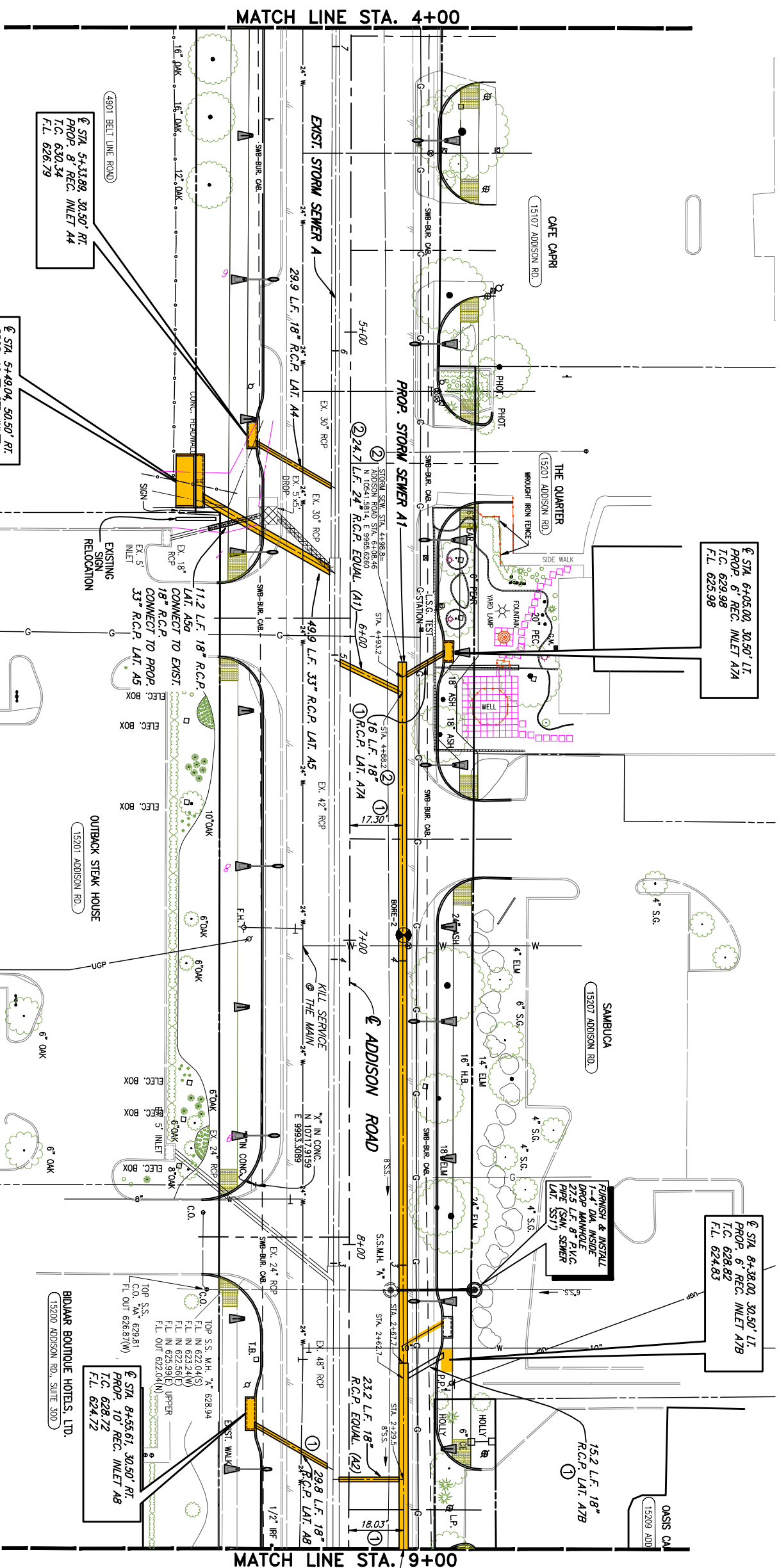
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM SEWER PLAN - STA. 0+00 TO STA. 4+00

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.W.B.
DRAWN BY: RAJL

PROJECT: 2002.102
DATE: SEPTEMBER 2006

SHEET NO. 36
OF 68 SHEETS

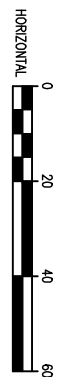


WARNING
ONCOR ELECTRICAL CONDUIT
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
ONCOR GAS LINE
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
TELEVISION
BURIED CABLE
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

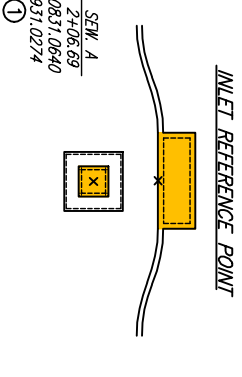
WARNING
S.W. BELL BURIED
TELEPHONE CABLE
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT



B.M.#19 "C" CUT IN CENTER OF INLET 150 FEET
SOUTH OF BELT LINE RD., EAST OF
E.D.V. 630.59

T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST
CORNER OF ADDISON RD. AND BELT
LINE RD.
ELEV. 634.80

T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF
ADDISON RD., STA. 9+49.52 FEET RT.
ELEV. 628.79



EXISTING STORM SEWER PIPE REMOVAL

- NOTES:**
1. CONNECTING TO EXISTING STORM SEWER & REMOVAL OF EXISTING STORM SEWER PIPE, INLETS AND OTHER APPURTENANCES IS SUBORDINATE TO PROPOSED STORM SEWER SYSTEM INSTALLATION.
 2. USED 1978 ADDISON ROAD AND KELLER SPRINGS CONSTRUCTION PLANS TO SHOW APPROXIMATE LOCATION AND DEPTH OF EXISTING STORM SEWER SHOWN IN THE PLANS, ALONG WITH LOCATING AND MEASURING THE DEPTH OF EXISTING STORM SEWER STRUCTURES.

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM SEWER PLAN - STA. 4+00 TO STA. 9+00**

BIRKHOFF, HENDRICKS & CONWAY L L P.
Dallas, Texas

DESIGNED BY: J.M.B.	PROJECT: 2002.102	SHEET NO. 37
DRAWN BY: R.L.L.	DATE: SEPTEMBER 2006	OF 68 SHEETS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

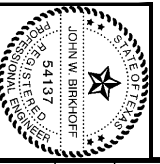
J.M.B.

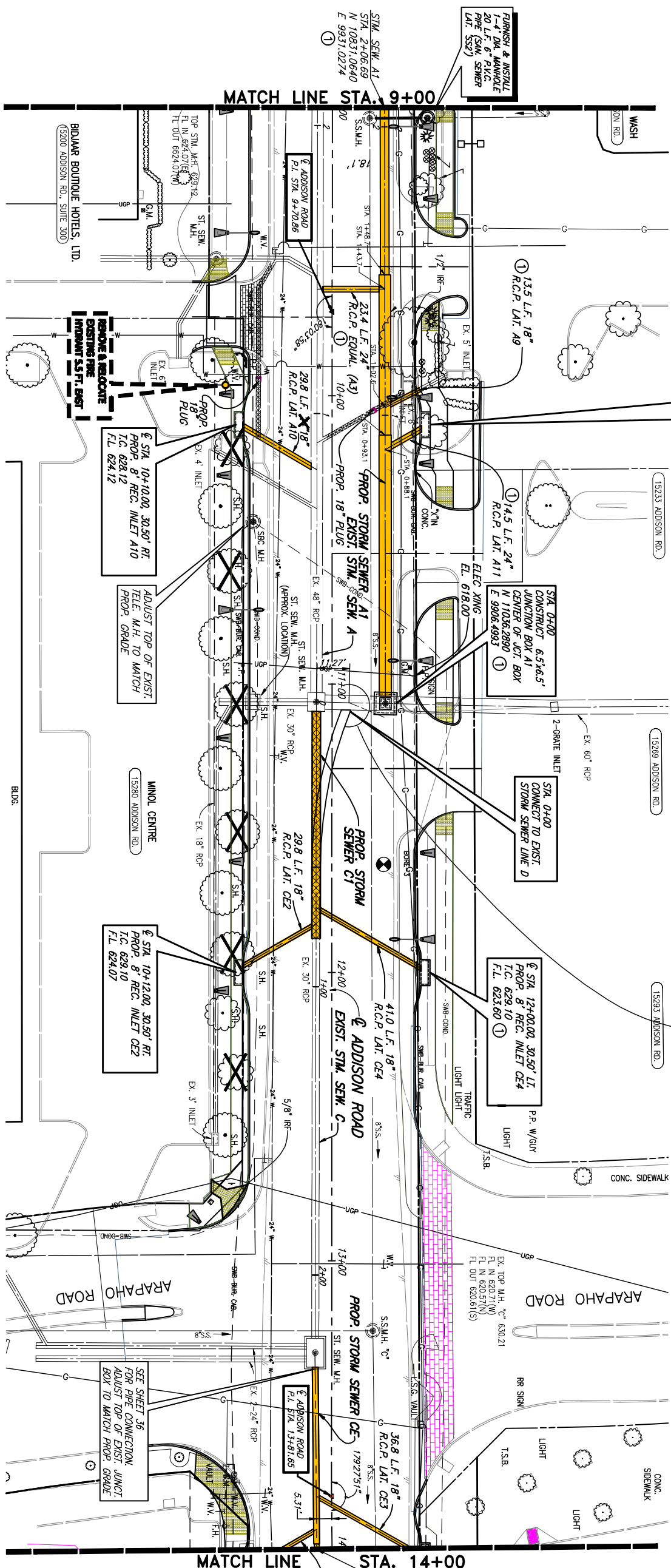
DATE: 3/21/07

- ② FIELD CHANGE NO. 2 MARCH 27, 2007
-SHORTEN LINE A BY 20.2 FEET.
-SHIFT EQUALIZER LATERAL (A1) 25.6 FEET NORTH
- ① FIELD CHANGE NO. 1 MARCH 22, 2007

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addendum, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conroy, L.L.P.

BY J.W.B. DATE 05/04/2010





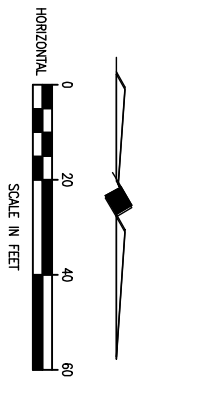
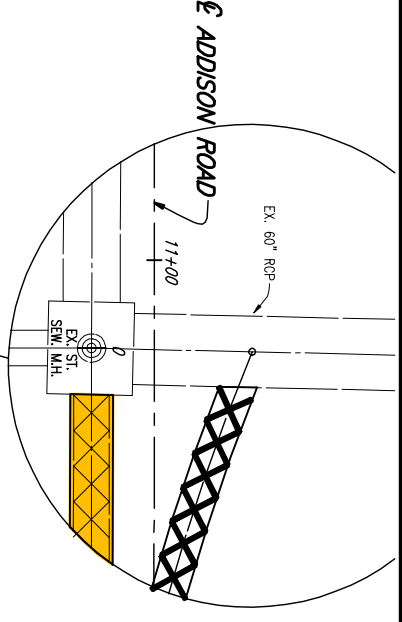
WARNING
ONCE ELECTRICAL CONDUIT IS EXPOSED, CALL 1-800-DIG-TEST 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

WARNING
ONCE GAS LINE IS EXPOSED, CALL 1-800-DIG-TEST 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

WARNING
ONCE BELL BLENDED BIPROD CABLE IS EXPOSED, CALL 1-800-DIG-TEST 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

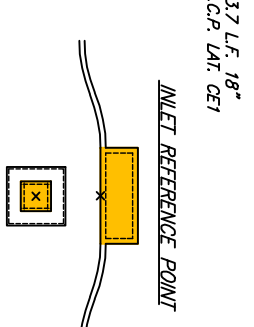
WARNING
ONCE BELL BLENDED TELEPHONE CABLE IS EXPOSED, CALL 1-800-DIG-TEST 72 HOURS PRIOR TO EXCAVATION IN VICINITY OF PROJECT

CALL US BEFORE YOU DIG
1-800-DIG-TEST



- B.M.#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF ELEV. 630.59
- T.B.M. AR-1 "C" CUT IN TOP OF WALL NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80
- T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD., § STA. 9+47.52 FEET RT. ELEV. 628.79
- T.B.M. AR-3 "C" CUT AT END OF RETAINING WALL NORTH OF LINGBERG DR. WEST SIDE OF ADDISON RD. § STA. 18+76.45 FEET LT. ELEV. 635.38

X TREE REMOVAL



EXISTING STORM SEWER PIPE REMOVAL

- NOTES:**
- CONNECTING TO EXISTING STORM SEWER & REMOVAL OF EXISTING STORM SEWER PIPE, INLETS AND OTHER APPURTENANCES IS SUBSIDIARY TO PROPOSED STORM SEWER SYSTEM INSTALLATION.
 - USED 1878 ADDISON ROAD AND KELLER SPRINGS CONSTRUCTION PLANS TO SHOW APPROXIMATE LOCATION AND DEPTH OF EXISTING STORM SEWER SHOWN IN THE PLANS, ALONG WITH LOCATING AND MEASURING THE DEPTH OF EXISTING STORM SEWER STRUCTURES.

These plans and related specifications were prepared for construction of this project and are not to be used for any other project without the written authorization of Birkhoff, Hendricks & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAH0 ROAD PHASE I
STORM SEWER PLAN - STA. 9+00 TO STA. 14+00**

BIKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.
DATE: 3/22/07

① FIELD CHANGE NO. 1 MARCH 22, 2007



DESIGNED BY:	J.W.B.	PROJECT:	2002 102	SHEET NO.	38
DRAWN BY:	R.A.L.	DATE:	SEPTEMBER 2006	OF	68 SHEETS

WARNING!!
EXPLORER'S 12-INCH
HIGH PRESSURE
PETROLEUM
PIPELINE CONDUIT
GREENVILLE AREA
SUPERVISOR AT (903) 527-1267
AT LEAST 48 HOURS
PRIOR TO ANY CONSTRUCTION
NEAR PIPELINE

WARNING
POWER
ELECTRICAL CONDUIT
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
ONCOR GAS LINE
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

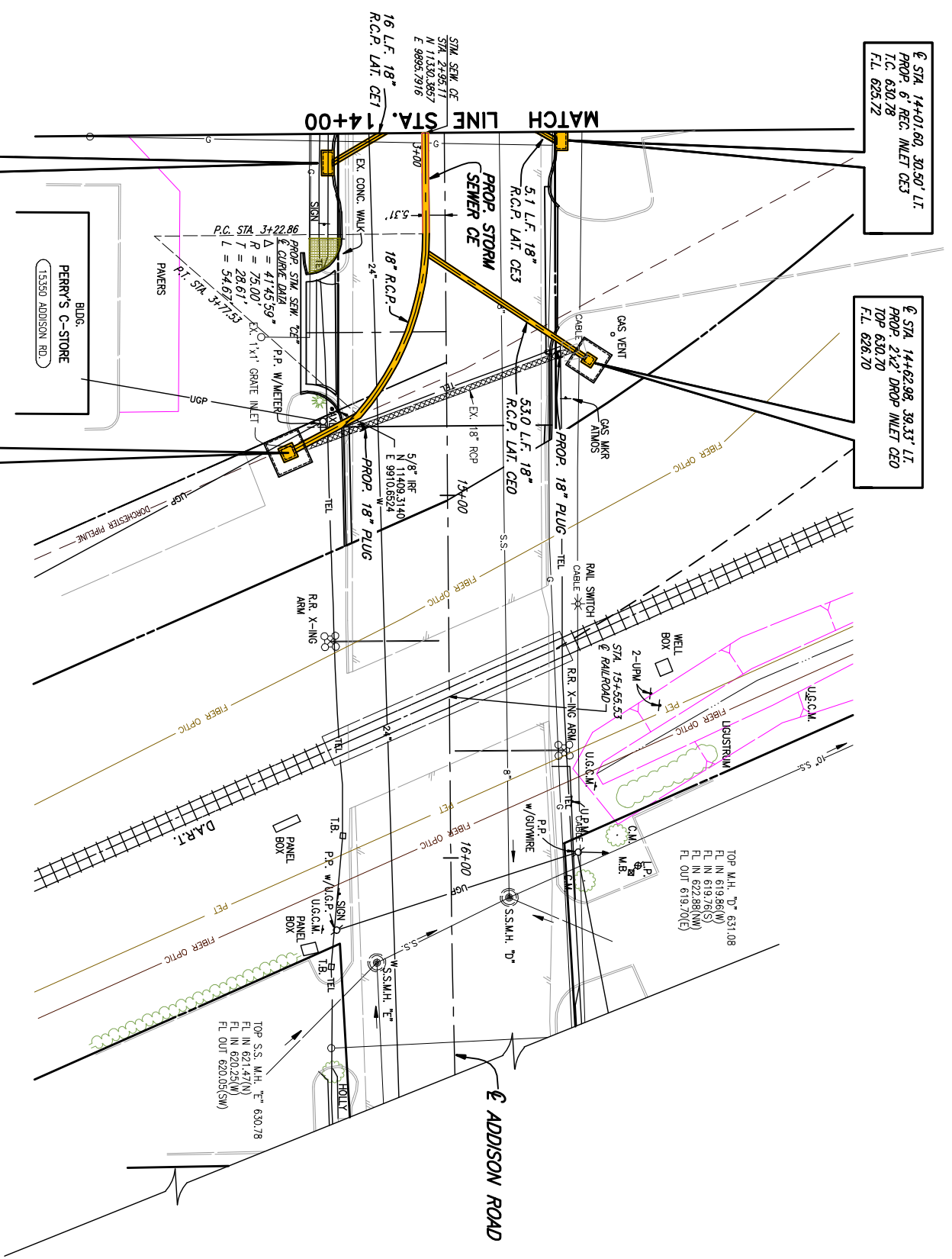
WARNING
BURIED FIBER OPTICS
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
BURIED FIBER OPTICS
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
BURIED FIBER OPTICS
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
DRAINAGE
PIPELINE
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT

WARNING
SAND FILL
PIPELINE
CALL 1-800-DIG-TESS
72 HOURS PRIOR TO
EXCAVATION IN VICINITY
OF PROJECT



STA. 14+08.00, 30.50' RT.
PROP. 6\"/>

STA. 14+87.79, 43.98' RT.
PROP. 3\"/>

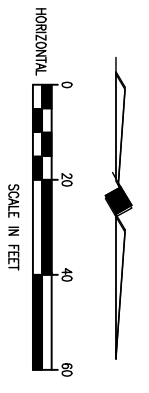
STA. 14+01.62, 30.50' LT.
PROP. 6\"/>

STA. 14+62.98, 39.33' LT.
PROP. 2\"/>

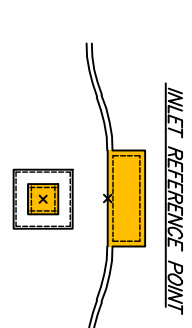
This record drawing is a compilation of the sealed engineering drawing for this project, modified by contractor change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY: J.M.B. DATE: 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 10/3/06



- B.M.#19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF INWOOD RD. ELEV. 630.59
- T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT ELD. 634.80
- T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD., STA. 9+87.52 FEET RT. ELEV. 628.79
- T.B.M. AR-3 "C" CUT AT END OF RETAINING WALL, NORTH OF LUMBERG DR., WEST SIDE OF ADDISON RD., STA. 18+76.45 FEET LT. ELEV. 635.38



- NOTES:
1. CONNECTING TO EXISTING STORM SEWER & REMOVAL OF EXISTING STORM SEWER PIPE, INLETS AND OTHER APPURTENANCES IS SUBSIDIARY TO PROPOSED STORM SEWER SYSTEM INSTALLATION.
 2. USED 1978 ADDISON ROAD AND KELLER SPRINGS CONSTRUCTION PLANS TO SHOW APPROXIMATE LOCATION AND DEPTH OF EXISTING STORM SEWER SHOWN IN THE PLANS, ALONG WITH LOCATING AND MEASURING THE DEPTH OF EXISTING STORM SEWER STRUCTURES.

These plans and related specifications were prepared for construction of this project. The information shown on these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



TOWN OF ADDISON, TEXAS

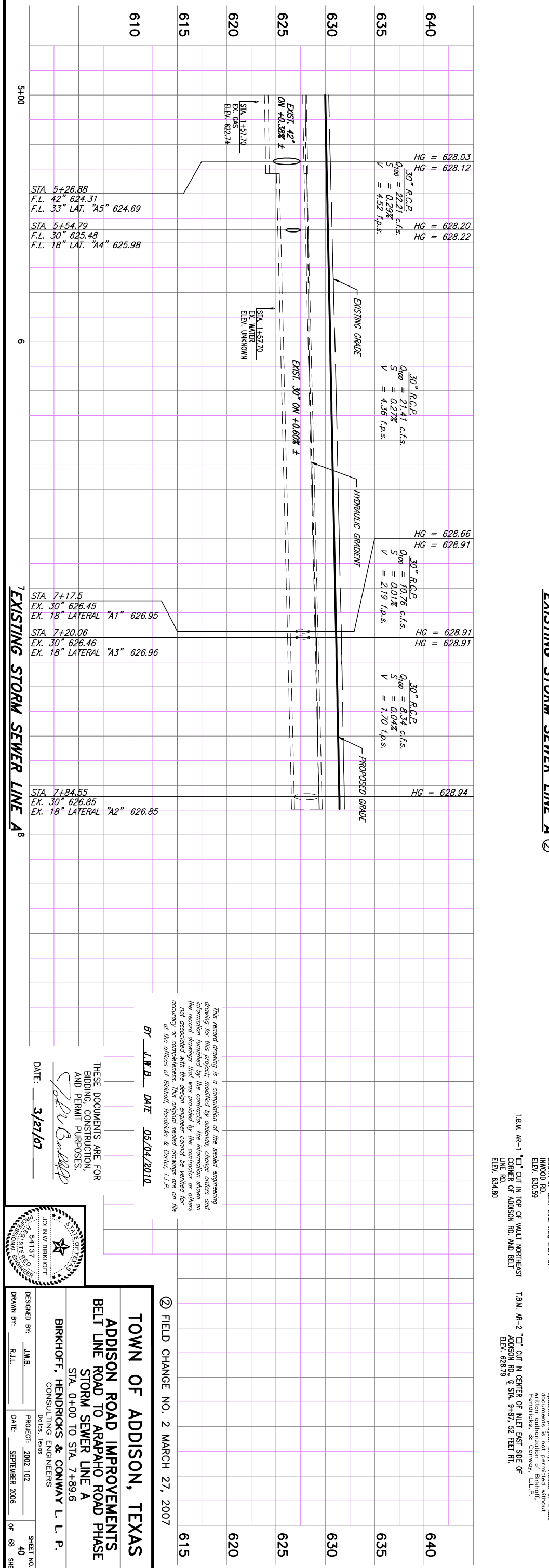
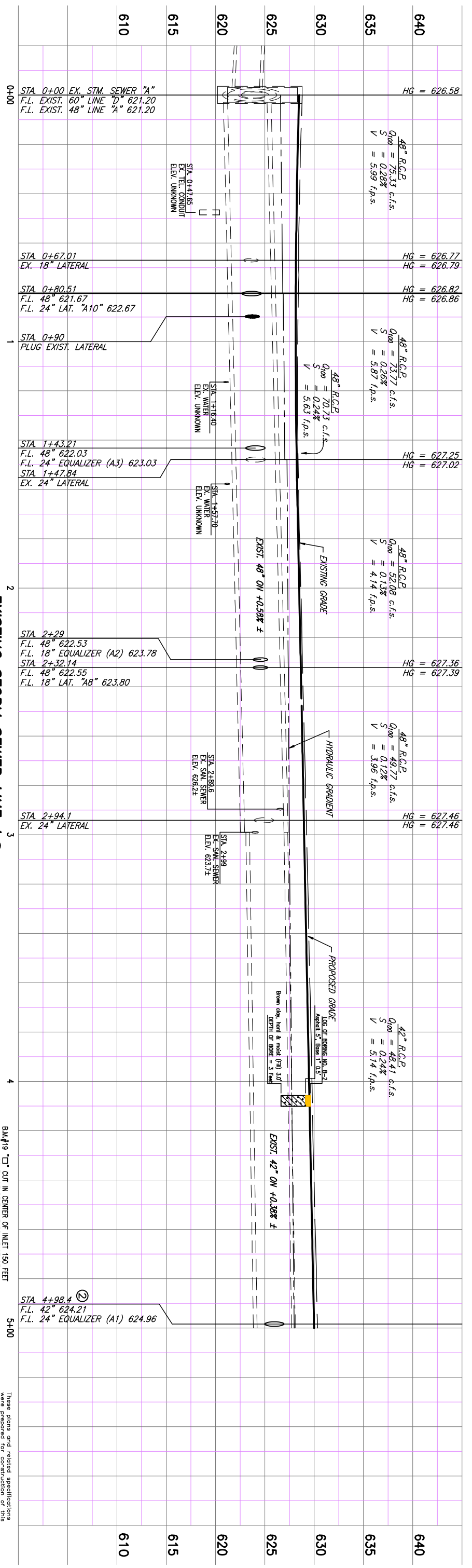
ADDISON ROAD IMPROVEMENTS
ARAPAHO ROAD TO ARAPAHO ROAD PHASE I
STORM SEWER PLAN - STA. 14+00 TO STA. 15+37

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: J.M.B.
DRAWN BY: R.L.L.

PROJECT: 2002.102
DATE: SEPTEMBER 2006

SHEET NO. 39
OF 88 SHEETS



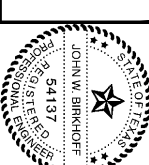
This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings is the responsibility of the contractor and does not constitute a warranty or representation of any kind by the engineer or architect. This original sealed drawing is on file at the office of Birkhoff, Hendricks & Conway, LLP.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DATE: 3/27/07



TOWN OF ADDISON, TEXAS
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM SEWER LINE A
 STA. 0+00 TO STA. 7+89.6

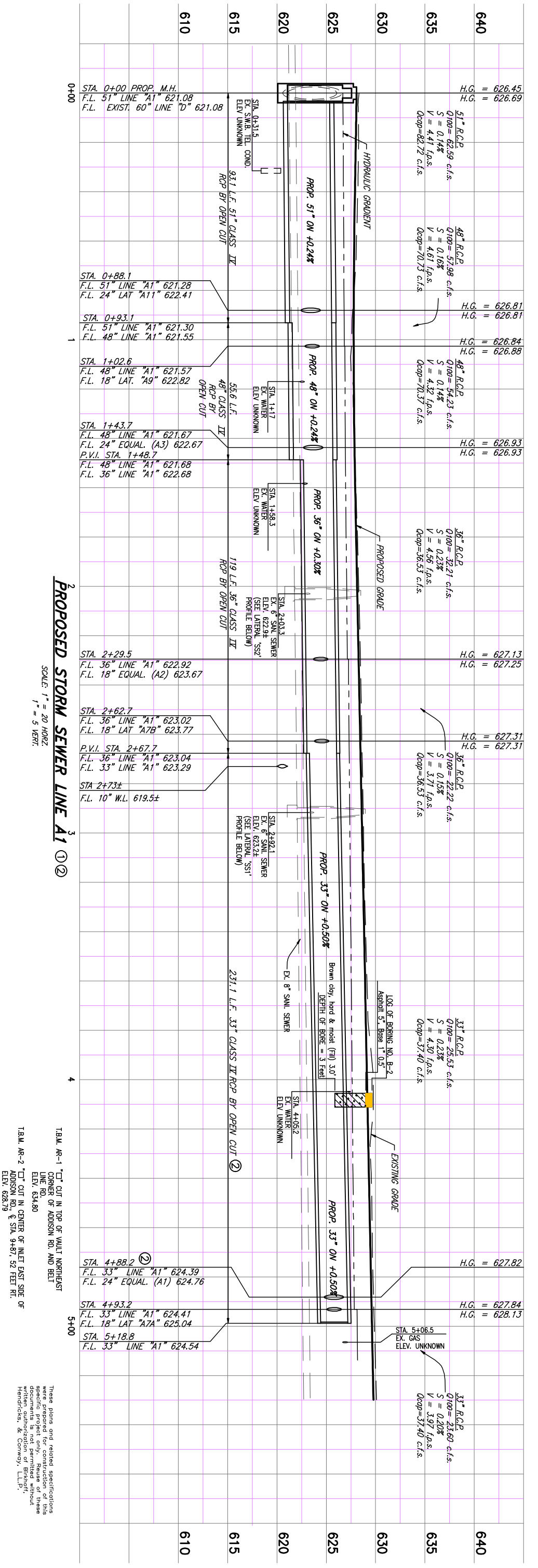
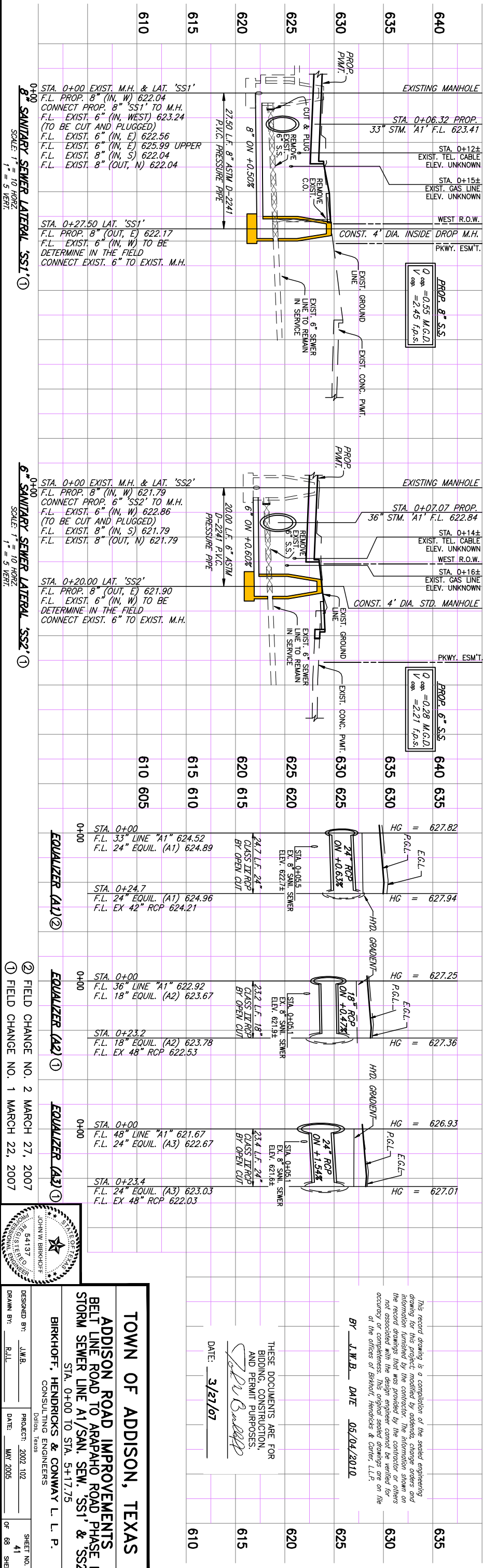
BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: J.W.B.
 DRAWN BY: R.A.L.
 PROJECT: 2002.102
 DATE: SEPTEMBER 2006
 SHEET NO. 40 OF 88 SHEETS

FIELD CHANGE NO. 2 MARCH 27, 2007

BM #19 "C" CUT IN CENTER OF INLET 150 FEET SOUTH OF BELT LINE RD., EAST OF INWOOD RD. ELEV. 630.59
 T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80
 T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD. & STA. 9+89.62 FEET RT. ELEV. 628.79

These plans and related specifications are the property of Birkhoff, Hendricks, & Conway, LLP. Their use for any other project or purpose without the written authorization of Birkhoff, Hendricks, & Conway, LLP, is prohibited.



② FIELD CHANGE NO. 2 MARCH 27, 2007
 ① FIELD CHANGE NO. 1 MARCH 22, 2007



TOWN OF ADDISON, TEXAS
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE 1
STORM SEWER LINE A1/SAN. SEW. 'SS1' & 'SS2'
 STA. 0+00 TO STA. 5+17.75

DESIGNED BY: J.W.B.
 PROJECT: 2002.102
 DATE: MAY 2005

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS

DATE: 3/27/07

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

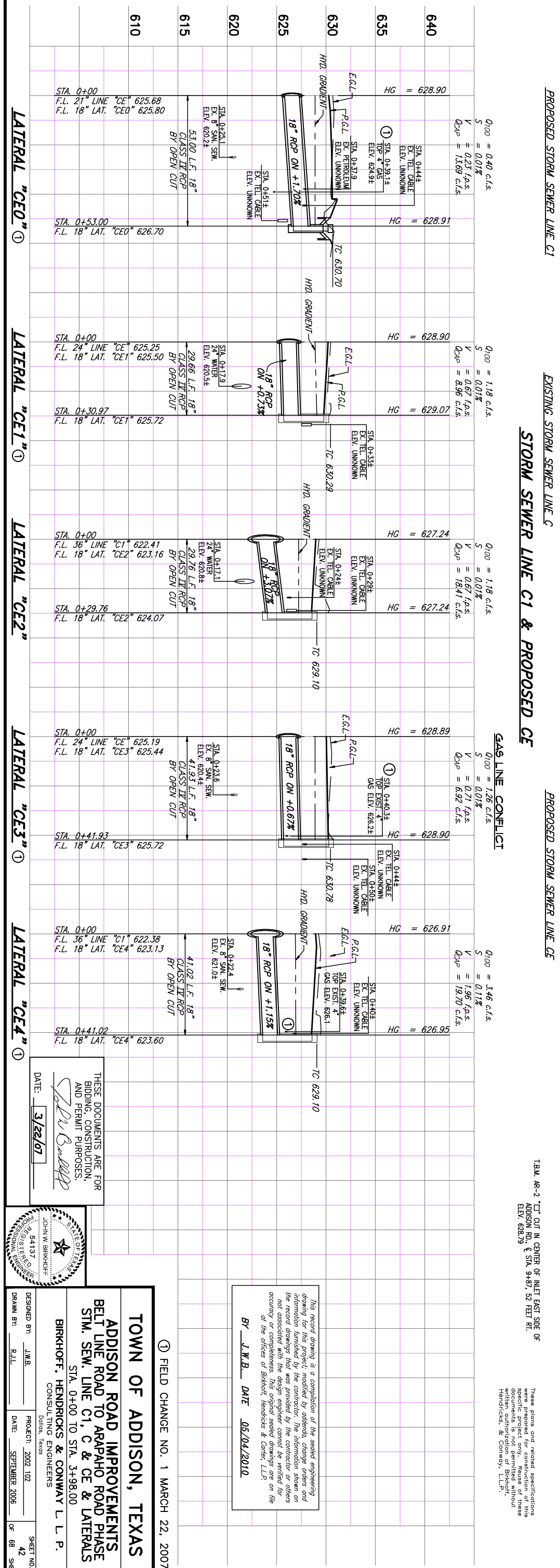
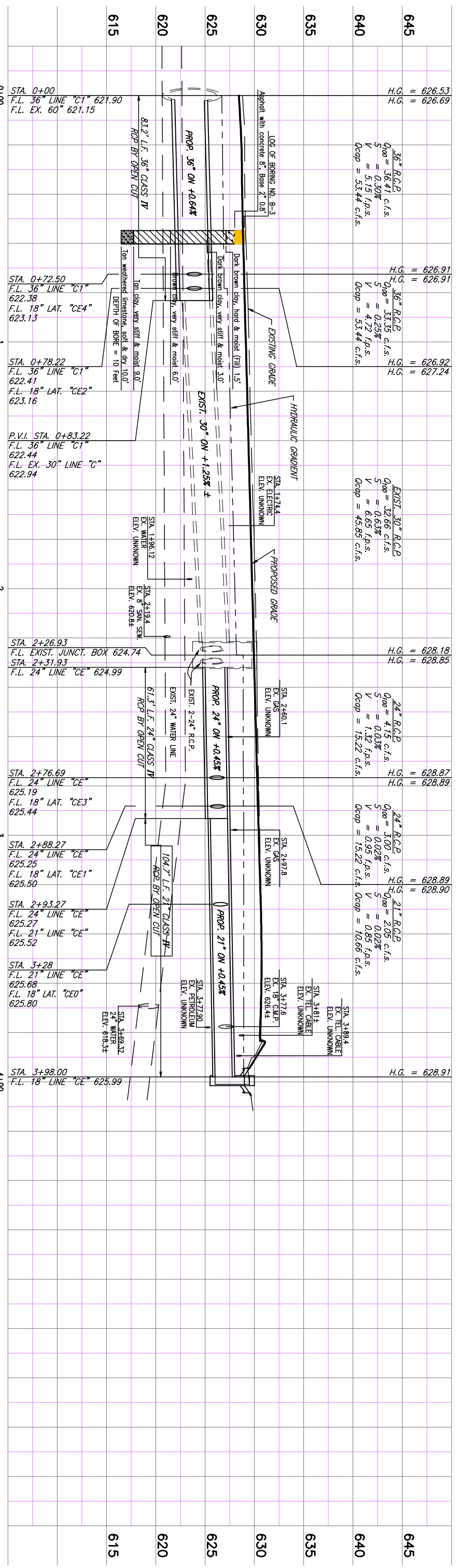
BY: J.W.B. DATE: 05/04/2010

This record drawing is a compilation of the sealed engineering drawings for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

These plans and related specifications were prepared for the use of the contractor. No liability is assumed by the design engineer for any errors or omissions in these documents if not permitted without the written authorization of Birkhoff, Hendricks & Conway, L.L.P.

T.B.M. AR-1 "C" CUT IN TOP OF VAULT NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 624.80

T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD. @ STA. 9+87.52 FEET RT. ELEV. 628.79



T.B.M. AR-2 "C" CUT IN CENTER OF INLET EAST SIDE OF
 ADDISON RD., E STA. 9+87, 52 FEET RL.
 ELEV. 628.79

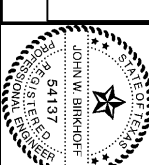
These plans and related specifications
 were prepared for construction of this
 specific project only. Reuse of these
 plans for any other project without the
 written authorization of Birkhoff,
 Hendricks, & Conway, LLP.

This record drawing is a compilation of the sealed engineering
 drawing for this project. It is not to be used for construction or
 information furnished by the contractor. The information shown on
 the record drawings that was provided by the contractor or others
 not associated with the design engineer cannot be verified for
 accuracy or completeness. This original sealed drawing is on file
 at the offices of Birkhoff, Hendricks & Carter, LLP.
 BY J.W.B. DATE 05/04/2010

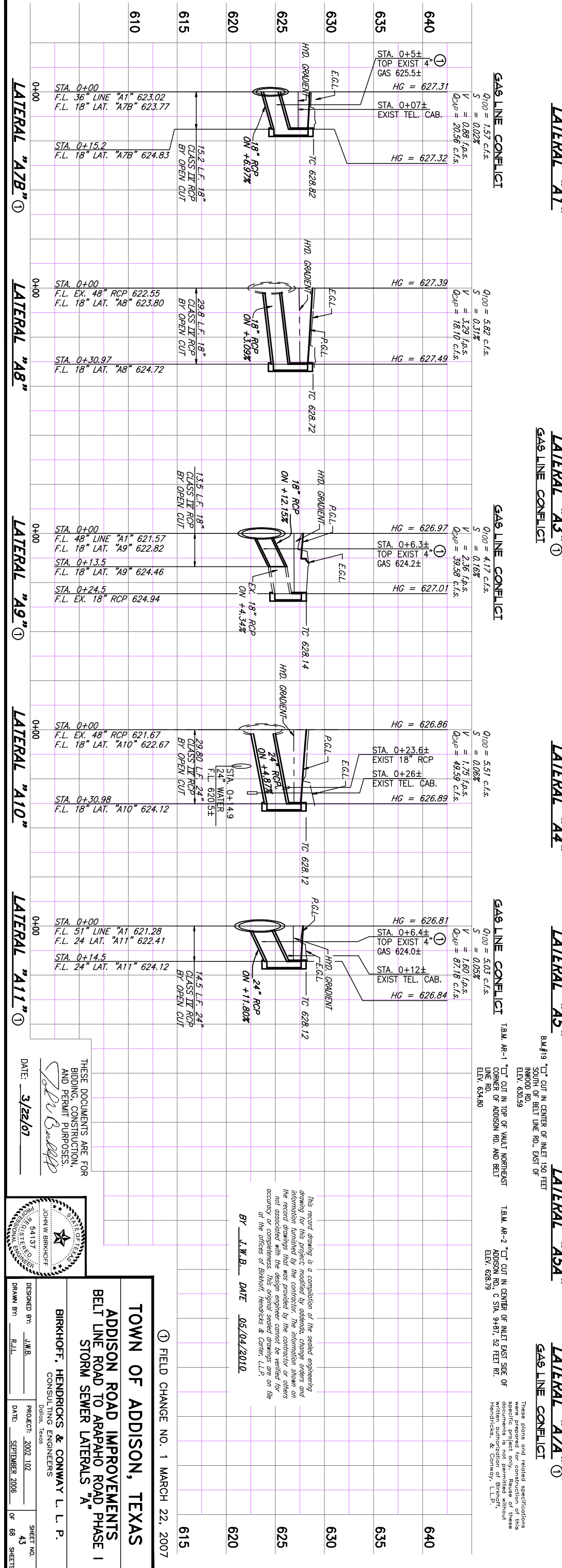
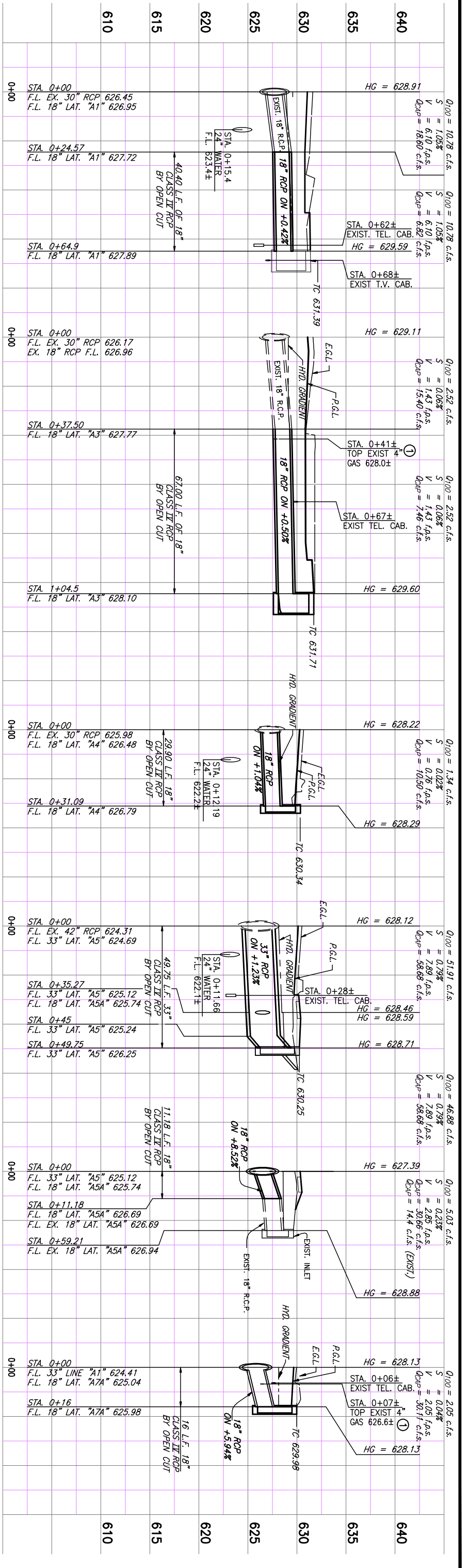
① FIELD CHANGE NO. 1 MARCH 22, 2007

TOWN OF ADDISON, TEXAS
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STM. SEW. LINE C1, C & CE & LATERALS
 STA. 0+00 TO STA. 3+98.00

THESE DOCUMENTS ARE FOR
 BIDDING, CONSTRUCTION,
 AND PERMIT PURPOSES.
 DATE: 3/22/07

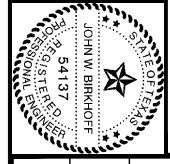


DESIGNED BY: J.W.B.
 DRAWN BY: R.J.L.
 PROJECT: 2002.102
 DATE: SEPTEMBER 2006
 SHEET NO. 42
 OF 88 SHEETS



THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 3/22/07



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE I

STORM SEWER LATERALS "A"

DESIGNED BY: J.W.B. DATE: SEPTEMBER 2006

DRAWN BY: R.L.L. DATE: SEPTEMBER 2006

PROJECT: 2002.102

DATE: SEPTEMBER 2006

SHEET NO. 43 OF 68 SHEETS

FIELD CHANGE NO. 1 MARCH 22, 2007

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and other documents that were provided by the contractor or others not associated with the design engineer. The design engineer cannot be held responsible for the accuracy or completeness of this original sealed drawing or the drawings of the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY: J.W.B. DATE: 05/04/2010

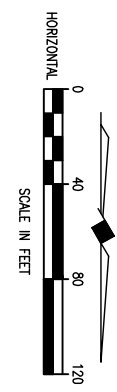
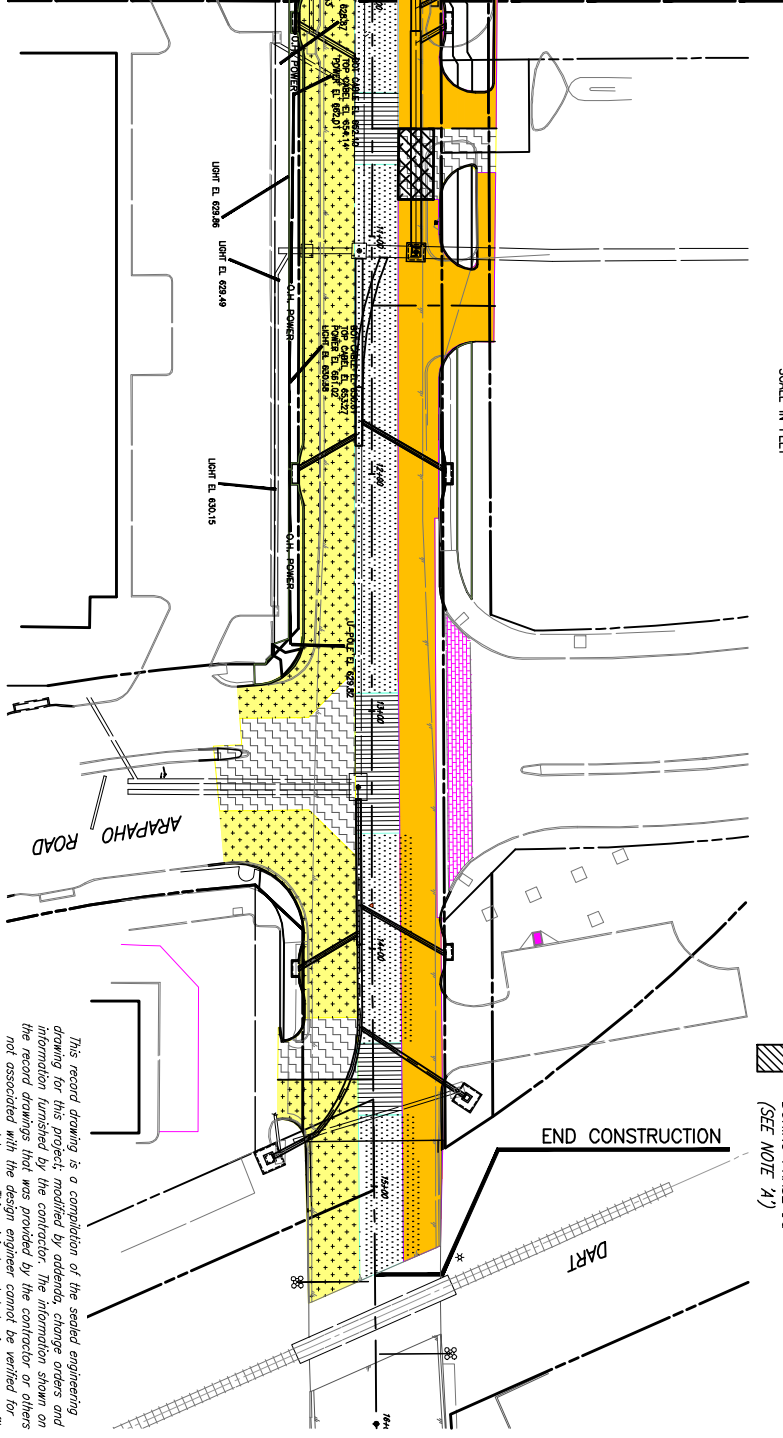
B.M.#19 "T" CUT IN CENTER OF INLET 150 FEET NORTH OF BELT LINE RD. EAST OF ELEV. 626.59

B.M.#1 "T" CUT IN TOP OF WALLI NORTHEAST CORNER OF ADDISON RD. AND BELT LINE RD. ELEV. 634.80

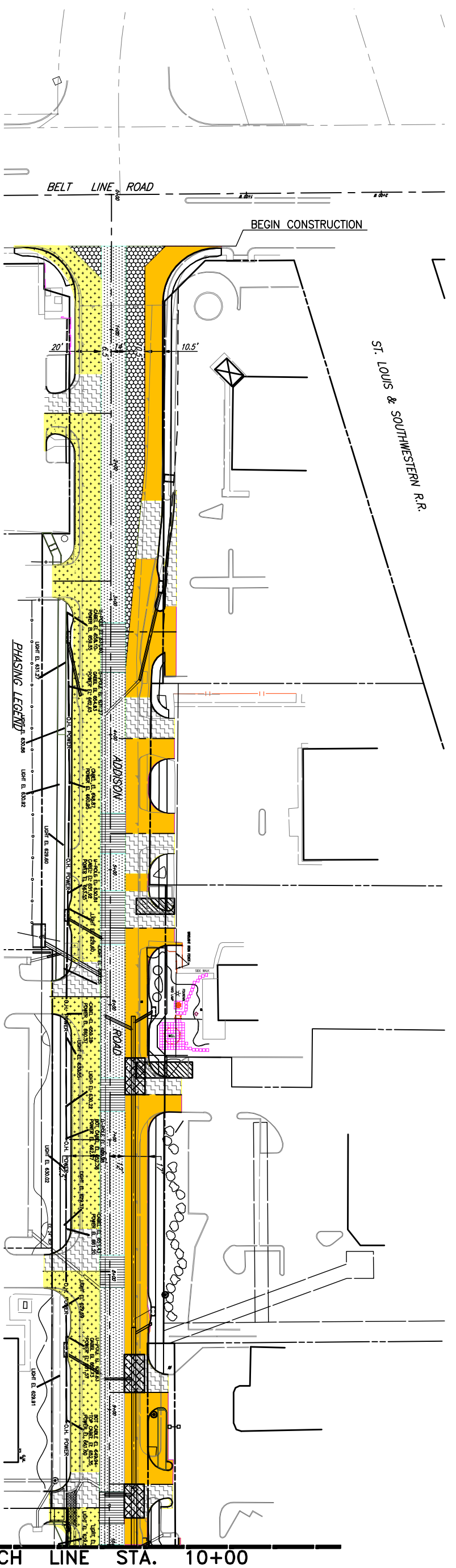
B.M.#2 "T" CUT IN CENTER OF INLET EAST SIDE OF ADDISON RD., C STA. 9+87.52 FEET RT. ELEV. 628.79

These plans and related specifications were prepared for construction of this project. The design engineer cannot be held responsible for the accuracy or completeness of this original sealed drawing or the drawings of the offices of Birkhoff, Hendricks & Conway, L.L.P.

MATCH LINE STA. 10+00



- NOTE A:
TEMPORARY H.M.A.C. SHALL BE SUBSIDIARY TO CONCRETE PAVEMENT - NO SEPARATE PAY ITEM
- PHASING LEGEND
- PHASE I a
 - PHASE I b
 - PHASE I c
 - PHASE II
 - PHASE III a
 - PHASE III b
 - TEMPORARY H.M.A.C. DURING PHASE I a (SEE NOTE A)
- TEMPORARY H.M.A.C. TO BE INSTALLED AFTER STORM SEWER INSTALL UNTIL PH I b PAVING IS COMPLETED.



PHASING LEGEND

GENERAL SEQUENCE OF CONSTRUCTION

CONSTRUCTION DESCRIPTION
ADDISON ROAD IMPROVEMENTS PROJECT INCLUDES THE CONSTRUCTION OF A REINFORCED CONCRETE 5-LANE, INCLUDING A CENTER TURN LANE, ROADWAY WITH MONOLITHIC CURBS, ALSO INCLUDING STORM SEWERS, STORM SEWER LATERALS, INLETS, SANITARY SEWER LATERALS, SANITARY SEWER MANHOLES, DRIVEWAYS, SIDEWALKS WITH BARRIER FREE RAMP, LANDSCAPE IMPROVEMENTS, ASPHALT PAVEMENT WITH CONCRETE CURB AND GUTTER, TRAFFIC MARKINGS, WATER SERVICE RELOCATIONS.

OTHER ITEMS INCLUDES REMOVAL OF EXISTING REINFORCED CONCRETE AND ASPHALT PAVEMENT, TEMPORARY TRAFFIC HANDLING DEVICES ALONG WITH OTHER MISCELLANEOUS ITEMS TO PROVIDE A COMPLETE OPERABLE ROADWAY.

PHASE I
CONTRACTOR SHALL MOBILIZE AND PERFORM NECESSARY CONTROL SKIAP, THEN PREPARE THE RIGHT-OF-WAY AND IMPLEMENT THE SWAP AND INSTALL EROSION CONTROL DEVICES ALONG WITH CONSTRUCTION SIGNING AND MARKINGS.

EXCAVATE AND CONSTRUCT STORM SEWER LINES 'A', INLETS, BOXES, JUNCTION BOX AND LATERAL, STUBOUTS AND LATERALS WHERE PRACTICAL FROM THE DOWNSTREAM END.

EXCAVATE AND CONSTRUCT SANITARY SEWER MANHOLES AND SANITARY SEWER SERVICE LATERALS AND CONNECT TO EXISTING SANITARY SEWER LATERALS. REMOVE ALL WATER METER BOXES AND WATER METERS THAT WILL BE IN PROPOSED CONCRETE PAVEMENT AND RELOCATE AS DIRECTED IN THE GENERAL NOTES.

PREPARE SUBGRADE ON FINISHED GRADE AND CONSTRUCT PORTION OF NORTHBOUND AND SOUTHBOUND LANES AT DESIGN GRADE AS SHOWN IN THE PLANS ALONG WITH PORTION OF DRIVEWAYS ALONG THE EAST AND WEST SIDE OF ROADWAY INCLUDING PLACEMENT OF TEMPORARY H.M.A.C. AT LOCATION FOR ACCESS TO AND FROM BUSINESSES. COMPLETE INLET TOPS.

FURNISH AND INSTALL ALL NECESSARY TEMPORARY TRAFFIC CONTROL DEVICES FOR THE COMPLETION OF PHASE I.

PHASE II
CONSTRUCT REMAINING STORM SEWER LINE 'A', LATERALS AND CONNECT TO LATERALS IN PHASE I. COMPLETE CONSTRUCTION OF STORM SEWER AND LATERALS, C1 & C2.

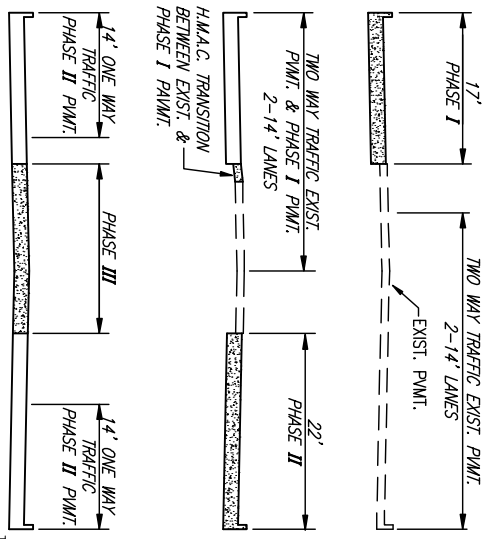
PREPARE SUBGRADE ON FINISHED GRADE AND CONSTRUCT PORTION OF NORTHBOUND, SOUTHBOUND LANES AND CENTER TURN LANE AT DESIGN GRADE AS SHOWN IN THE PLANS INCLUDING PLACEMENT OF TEMPORARY H.M.A.C. AT LOCATION FOR ACCESS TO AND FROM BUSINESSES.

FURNISH AND INSTALL ALL NECESSARY TEMPORARY TRAFFIC CONTROL DEVICES FOR THE COMPLETION OF PHASE II.

PHASE III
COMPLETE STORM SEWER LINE 'A', LATERALS IN PHASE I & PHASE II. COMPLETE STORM SEWER AND LATERALS C1 & C2 IN PHASE I & PHASE II.

PREPARE SUBGRADE ON FINISHED GRADE AND CONSTRUCT PORTION OF NORTHBOUND, SOUTHBOUND LANES AND CENTER TURN LANE AT DESIGN GRADE AS SHOWN IN THE PLANS.

COMPLETE THE INSTALLATION OF ALL PERMANENT SIGNING AND PAVEMENT MARKINGS, STREET LIGHTS AND PEDESTRIAN LIGHTS. COMPLETE FINAL GRADING, TOP SOIL, LANDSCAPE AND IRRIGATION.



PHASING SECTIONS (LOOKING NORTH)
N.T.S.

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
PHASING PLAN

DESIGNED BY: J.M.B.
DRAWN BY: R.L.L.
PROJECT: 2002.102
DATE: SEPTEMBER 2006



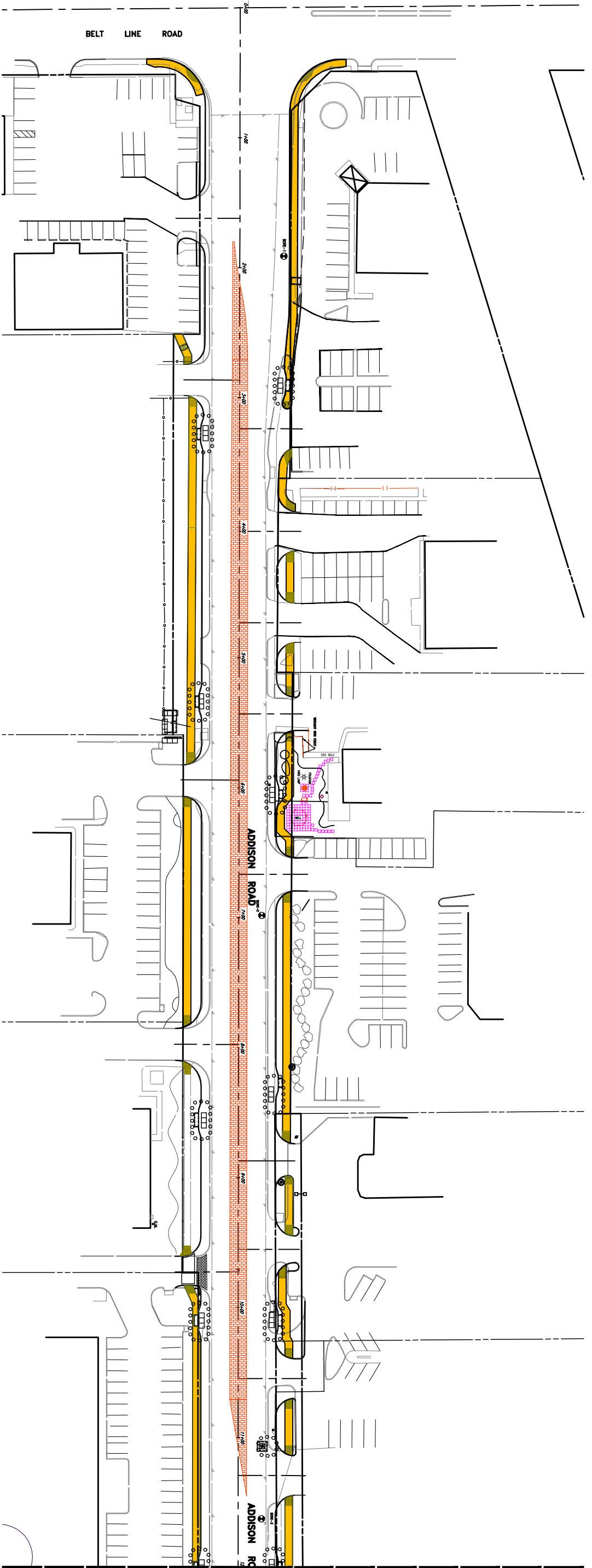
BIRKHOFF, HENDRICKS & CONWAY LLP.
CONSULTING ENGINEERS
Dallas, Texas

SHEET NO. 44
OF 88 SHEETS

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY: J.W.B. DATE: 05/04/2010

MATCH LINE STA. 12+00



MATCH LINE STA. 12+00

GENERAL NOTES:

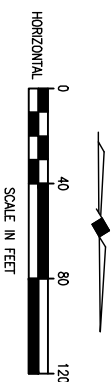
1. EROSION CONTROL DEVICES ALONG ROADWAY SHALL BE 3 FEET OFF THE BACK OF CURB.
2. ALL NON-PAVED AREAS SHALL HAVE GRASS COVER ESTABLISHED BY EITHER HYDROMULCH OR BROADCAST SEED AND FERTILIZER UNLESS SHOWN TO RECEIVE BLOCK SOO.
3. CONTRACTOR SHALL CONSTRUCT ALL DEVICES AS QUICKLY AS IS PRACTICAL FOR PROPOSED STRUCTURES AND SHALL MAINTAIN THROUGHOUT CONSTRUCTION.
4. REFER TO STORM DRAINAGE PLAN FOR ADDITIONAL INFORMATION REGARDING LOCATION OF PROPOSED CHANNELS AND INLETS.
5. REFER TO STORM DRAINAGE PROFILES AND CROSS-SECTIONS FOR ADDITIONAL INFORMATION REGARDING VERTICAL CONTROL FOR PROPOSED CHANNELS AND INLETS.
6. 40 L.F. SEDIMENT CONTROL FENCE ALLOWED IN ESTIMATED QUANTITY FOR EACH INLET. EROSION CONTROL DEVICE SHOWN.
7. AFTER CONSTRUCTION OF ROADWAY, BACKFILL BEHIND CURB WITH TOPSOIL AND PLACE SOLID SOO END TO END AND SIDE TO SIDE FOR A DISTANCE OF 4 FEET. ALL OTHER DISTURBED AREAS SHALL BE GRADED, HAND RAKED AND HYDROMULCHED.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

LEGEND PHASE I

- SILT FENCE
- OVERFLOW STRUCTURE
- EXCAVATED INLET PROTECTION
- INLET PROTECTION
- STONE OUTLET SEDIMENT TRAP



These plans and related specifications were prepared for construction of this project. No part of these documents may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DATE: 10/3/10



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

BELT LINE ROAD TO ARAPAHO ROAD PHASE I

STORM WATER POLLUTION PREVENTION PLAN

BIRKHOFF, HENDRICKS & CONWAY L.L.P.

CONSULTING ENGINEERS

DESIGNED BY: J.W.B.

PROJECT: 2002.102

DATE: SEPTEMBER 2006

DRAWN BY: R.L.L.

SHEET NO. 45 OF 68 SHEETS

SITE DESCRIPTION

PROJECT LIMITS: ADDISON ROAD FROM BELT LINE TO ARAPAHO ROAD 1537 LINEAR FEET

PROJECT DESCRIPTION: THE CONSTRUCTION GENERALLY OF A 5 LANE REINFORCED CONCRETE ROADWAY REPLACING A 4 LANE ASPHALT ROADWAY

MAJOR SOIL DISTURBING ACTIVITIES: SOIL DISTURBING ACTIVITIES WILL INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
PREPARATION OF RIGHT-OF-WAY, EXCAVATION AND EMBANKMENT FOR ROADWAY
STORM SEWER CONSTRUCTION, UTILITY CONSTRUCTION AND ACCESS ENTRANCE
CONSTRUCTION FROM EXISTING ROADWAYS.

TOTAL DRAINAGE AREA: 50 ACRES

TOTAL DRAINAGE AREA TO BE DISTURBED: 4 ACRES

WEIGHTED RUNOFF COEFFICIENT: PAVED AREAS 0.90 (1.7 ACRES)
GRASS AREAS 0.50 (2.3 ACRES)

EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: THE EXISTING SOILS ARE GENERALLY BROWN CLAY WITH LIMESTONE FRAGMENTS.

NAME OF RECEIVING WATERS: RAILROAD RIGHT-OF-WAY TO RAMHIDE CREEK

WATER QUALITY: WITHIN THE CONSTRUCTION DRAINAGE BASIN
ALL KNOWN RUNOFF WILL BE FROM RAINFALL EVENTS, AND WILL CONTAIN ROADWAY POLLUTANTS.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT PLANTING, SODDING, OR SEEDING
- MULCH SOD
- SOIL RETENTION BLANKET
- BUFFER ZONES
- PRESERVATION OF NATURAL RESOURCES

OTHER: DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED (TEMPORARILY OR FINALLY) SHALL BE EITHER SEEDED OR SODDED WITHIN 14 DAYS UNLESS CONSTRUCTION ACTIVITIES ARE SCHEDULED TO RESUME WITHIN 21 DAYS.

STRUCTURAL PRACTICES:

- SILT FENCES
- HAY BALES
- ROCK BERMS
- DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- DIVERSION DIKE AND SWALE COMBINATIONS
- PIPE SLOPE DRAINS
- PAVED FLUMES
- ROCK BEDDING AT CONSTRUCTION EXIT
- TIMBER MATTING AT CONSTRUCTION EXIT
- CHANNEL LINERS
- SEDIMENT TRAPS
- SEDIMENT FILTERS
- STORM INLET SEDIMENT TRAP
- STONE OUTLET STRUCTURES
- CURBS AND GUTTERS
- STORM SEWERS
- VELOCITY CONTROL DEVICES

OTHER: _____

NARRATIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

- 1) PREPARE THE RIGHT-OF-WAY, INSTALL INLET PROTECTION
- 2) CONSTRUCT UTILITIES, STORM SEWERS AND DRAINAGE CHANNEL
- 3) BEGIN EXCAVATION OF ROADWAY, STABILIZE AND PLACE CONCRETE PAVEMENT.
- 4) AFTER ALL WORK HAS BEEN COMPLETED, INCLUDING STABILIZATION OF THE SITE, COMPLETION OF A STAND OF GRASS AND AS APPROVED BY THE OWNER, THE CITY SHALL DIRECT THAT ALL TEMPORARY STRUCTURAL EROSION CONTROL DEVICES BE REMOVED AND THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITH PERMANENT SODDING.

STORM WATER MANAGEMENT: MANAGEMENT OF THE STORM WATER RUNOFF WILL BE PROVIDED BY THE CONSTRUCTION OF TRAPEZOIDAL CHANNELS, INLETS, AND THE EXTENSION OF THE EXISTING STORM SEWER SYSTEM.

EARTHWORK: CUT: 5,200 CUBIC YARDS
FILL: 20 CUBIC YARDS

SIDE SLOPES: SEE ROADWAY CROSS SECTIONS (100 FOOT INTERVALS), GENERALLY FLAT
SEE CHANNEL CROSS SECTIONS 3:1 SIDE SLOPES

OTHER EROSION AND SEDIMENT CONTROLS:

MAINTENANCE: ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE DONE AT THE EARLIEST DATE POSSIBLE, BUT NO LATER THAN 7 CALENDAR DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS ADJACENT TO CREEKS AND DRAINAGEWAYS SHALL HAVE PRIORITY FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS.

INSPECTION: AN INSPECTION WILL BE PERFORMED BY A CONTRACTOR APPROVED INSPECTOR IN ACCORDANCE WITH THE MOST RECENT MDSR REQUIREMENTS. AN INSPECTION AND MAINTENANCE REPORT WILL BE MADE PER EACH INSPECTION. BASED ON THE INSPECTION RESULTS, THE CONTRACTOR SHALL BE REQUIRED PER THE INSPECTION REPORT. CITY SHALL REVIEW ALL CONTRACTOR INSPECTIONS. CITY INSPECTOR TO INSPECT EROSION CONTROL DEVICES EVERY 14 CALENDAR DAYS.

WASTE MATERIALS: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL STATE AND LOCAL CITY SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION, AND THE TRASH WILL BE HAULED TO A LOCAL LANDFILL. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINTS, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, OR CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY.

SANITARY WASTE: ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

OFF SITE VEHICLE TRACKING:

- HAIL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY
- STABILIZED CONSTRUCTION ENTRANCE

OTHER: THE CONTRACTOR SHALL BE RESPONSIBLE FOR AUGMENTING THESE PLANS WITH OTHER MEASURES FOR ANY OTHER TEMPORARY EROSION CONTROL MEASURES OCCASIONED BY THE WORK SUCH AS FOR HAUL ROADS AND BORROW PIT ACCESS. ALL CONTINGENT EROSION CONTROL PRACTICES SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OR CONSTRUCTION.

REMARKS: DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATER BODY OR STREAM BED CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.
ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENTS, TEMPORARY BRIDGES, MATTING, FALSE WORK, PILING, DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK. THERE ARE NO HISTORICAL SITES OR ENDANGERED SPECIES IMPACTED BY THIS PROJECT.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY: J.W.B. DATE: 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 10/3/10

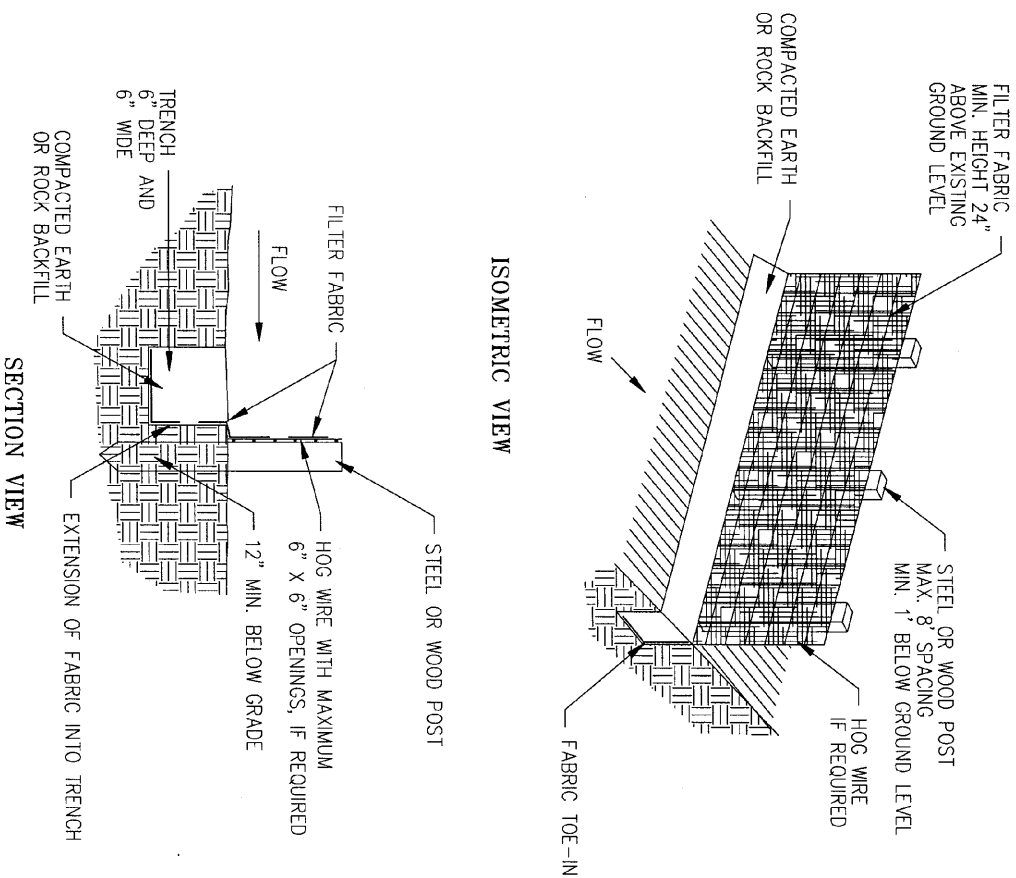


TOWN OF ADDISON, TEXAS

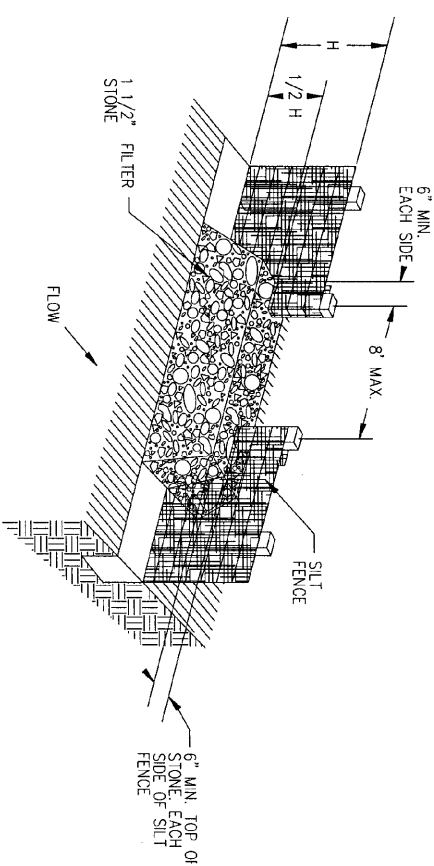
**ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 STORM WATER POLLUTION PREVENTION PLAN DETAILS**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: J.W.B. PROJECT: 2002 102 SHEET NO. 46
 DRAWN BY: TJH DATE: SEPTEMBER 2006 OF 68 SHEETS



SILT FENCE
N.T.S.



STONE OVERFLOW STRUCTURE
N.T.S.

This record drawing is a compilation of the sealed engineering drawings for this project, modified by addenda, change orders, and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

5.5 SILT FENCE

1. DESCRIPTION - A temporary sediment barrier consisting of filter fabric stretched between and attached to metal or wooden posts, with the bottom of the fabric firmly embedded in the soil. At installations draining larger areas the filter fabric will be attached to a hog wire support that is attached to the fence posts.

2. PURPOSE - To slow the flow of sediment laden water from small disturbed areas to allow sedimentation to occur and to filter out larger sediment particles as the water flows through the filter fabric.

3. APPLICATIONS - Silt fence is normally used as a perimeter control immediately downstream of small disturbed areas. It can also be used as a flow diversion for very small drainage areas, but does not function as well as a normal diversion channel and is usually much more expensive.

4. LIMITATIONS - Do not install silt fences across channels, ditches, streams, pipe outlets, or areas of concentrated water flow. Silt fence locations can limit construction vehicle access so the locations should be well planned to prevent obstructions. Water will pond behind the silt fence resulting in localized flooding during major rain events.

5. DESIGN CRITERIA - Place silt fence along perimeter of site where disturbed area sheet runoff must be controlled. Limit the drainage area to 0.25 acres per 100 lineal feet of fence. Provide hog wire support backing whenever the drainage area exceeds 0.10 acres per 100 lineal feet of fence. Maximum post spacing shall not exceed 8 feet. Stone overflow structures or other outlet device shall be installed at all low points along the fence or every 300 feet if there is no apparent low point.

6. MATERIAL SPECIFICATIONS

- A. Filter Fabric - NCTCOG Specification 2.23.4.
- B. Washed Stone - NCTCOG Specification 2.1.8.(e).
- C. Hog Wire - NCTCOG Specification 2.8.2.(b)(1).
- D. Fence Posts - NCTCOG Specification 2.8.2.(b) for wood or steel.

7. MAINTENANCE REQUIREMENTS - Silt fence should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from behind fence when the depth of sediment has built up to one-third the height of the fence above grade. Inspect the base of the fence to ensure that no gaps have developed and re-trench as necessary. Inspect fence posts to ensure that they are properly supporting the fence. Straighten, reset and add posts if necessary. If filter fabric is ripped, damaged or deteriorated, replace it in accordance with the original specifications and details.

These plans and related specifications are subject to change without notice. Release of these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

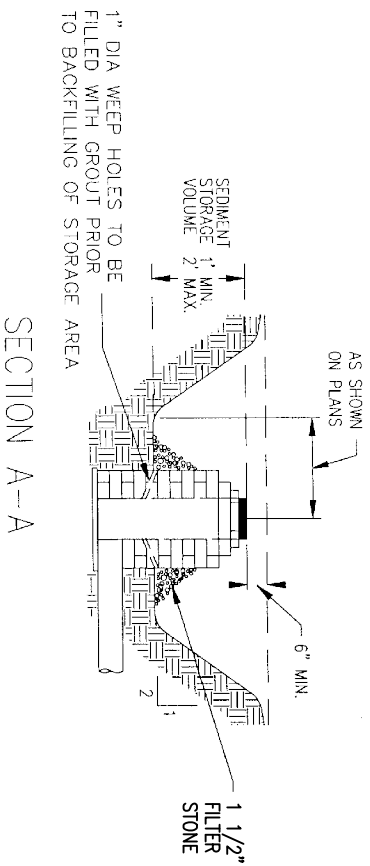
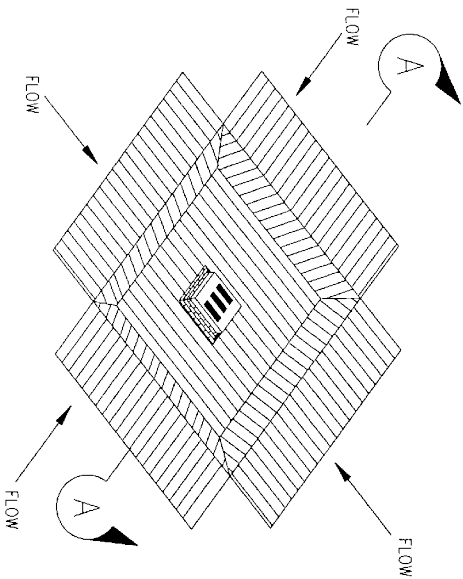
**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM WATER POLLUTION PREVENTION PLAN DETAILS**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
Dallas, Texas

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.
DATE: 10/31/06



DESIGNED BY: <u>J.W.B.</u>	PROJECT: <u>2002.102</u>	SHEET NO. <u>47</u>
DRAWN BY: <u>TJH</u>	DATE: <u>SEPTEMBER 2006</u>	OF <u>68</u> SHEETS



EXCAVATED DROP INLET PROTECTION
N.T.S.

5.7 EXCAVATED DROP INLET PROTECTION

1. DESCRIPTION - An excavated area surrounding a storm drain drop inlet.

2. PURPOSE - To remove sediment from storm runoff before it enters into the storm drain system.

3. APPLICATIONS - Where storm drain drop inlets are to be used prior to final stabilization of the area draining to the structure. This method is used where the inlet will collect relatively heavy flows and overflow capability is needed. Weep holes or other methods of de-watering the storage area must be provided. This method can also be used in conjunction with other drop inlet protection methods (block and gravel or silt fence barriers) to provide more efficient sediment removal.

4. LIMITATIONS - Ponding will occur around the inlet with possible localized flooding as the result. Final stabilization and cleanout may be difficult if the finished area around the drop inlet is to be paved. This method is not applicable to use around existing inlets in a paved area.

5. DESIGN CRITERIA

- A. Drainage Area - 5.0 acres or less.
- B. Depth - 1 foot minimum, 2 feet maximum, measured from crest of inlet.
- C. Volume - 1800 cubic feet per acre of drainage area.
- D. Side Slopes - 2H:1V or flatter.
- E. De-watering Time - 48 hours or less. Size and number of holes as needed.

6. MATERIAL SPECIFICATIONS

- A. Filter Stone - NCTCOG Specification 2.1.8.(e)

7. MAINTENANCE REQUIREMENTS - Excavated drop inlet protection should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the excavation when the depth of sediment has built up to one-half of the design depth. If de-watering of storage volume is not occurring, clean or replace filter stone surrounding weep holes. Clean the stone surface the first few times by raking. Repeated sediment build-up will require filter stone replacement.

This record drawing is a completion of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The contractor shall retain the original drawings for use in connection with the project. The design engineer cannot be held responsible for the accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
John W. Birkhoff
DATE: 10/31/06



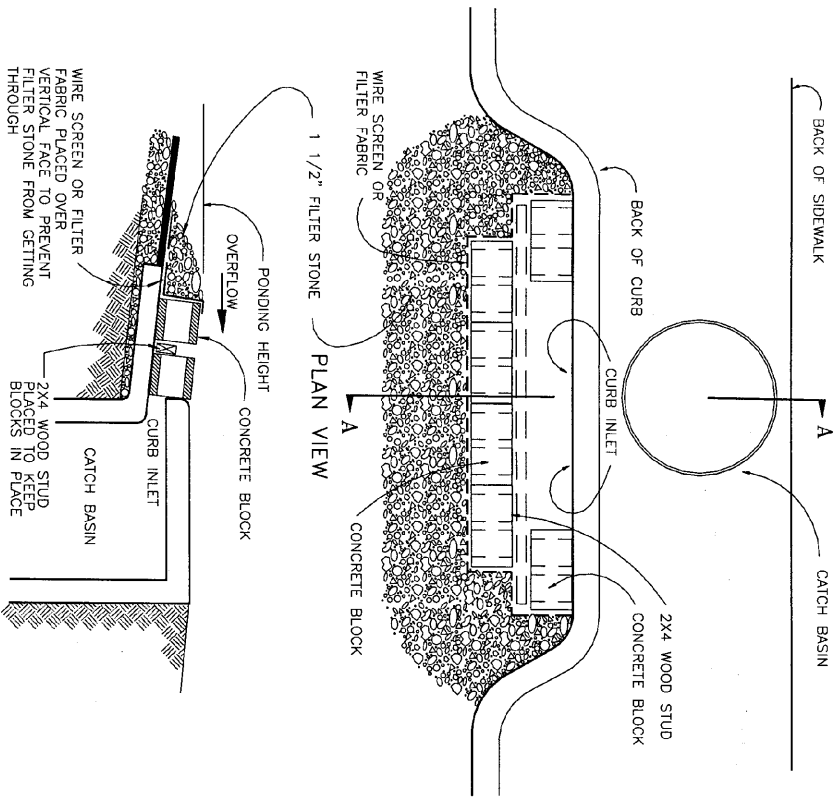
TOWN OF ADDISON, TEXAS

**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM WATER POLLUTION PREVENTION PLAN DETAILS**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
DALLAS, TEXAS

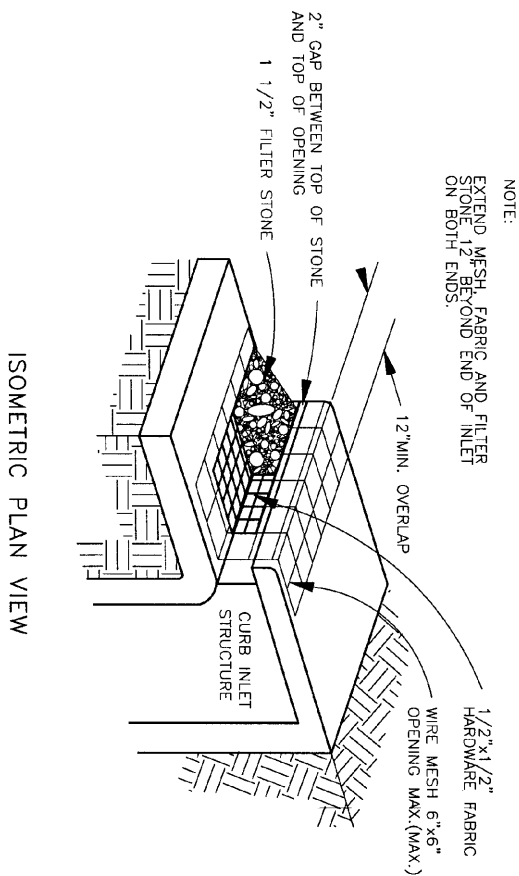
DESIGNED BY: J.W.B. PROJECT: 2002.102 SHEET NO. 48
DRAWN BY: T.H. DATE: SEPTEMBER 2006 OF 68 SHEETS

These plans and related specifications are the property of Birkhoff, Hendricks & Conway, L.L.P. and are to be used only for the specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

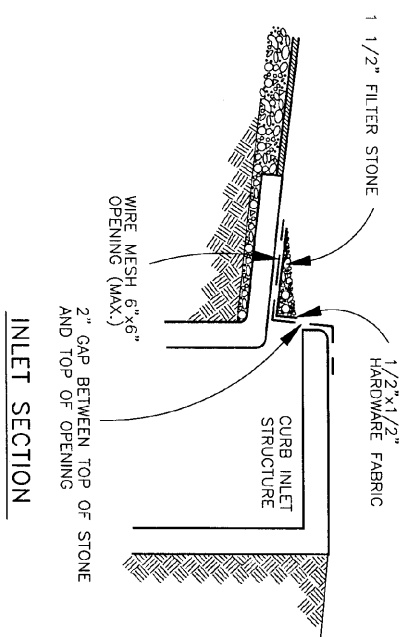


SECTION A - A

BLOCK AND GRAVEL RECESSED CURB INLET PROTECTION
N.T.S.



ISOMETRIC PLAN VIEW



INLET SECTION

TYPE A CURB INLET PROTECTION
N.T.S.

NOTE:
EXTEND MESH FABRIC AND FILTER STONE 12\"/>

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

5.10 CURB INLET PROTECTION

1. DESCRIPTION - A temporary sediment control barrier made of filter stone and standard concrete block, welded wire fabric, hardware fabric or 2x4 studs surrounding a storm drain curb inlet.

2. PURPOSE - To remove sediment from storm runoff before it enters into the storm drain system.

3. APPLICATIONS - Where storm drain curb inlets are to be used prior to final stabilization of the area draining to the structure. This method is used where the inlet will collect relatively heavy flows and overflow capability is needed. This method is also to be used to protect existing curb inlets located in paved areas.

4. LIMITATIONS - Ponding will occur around the inlet with possible localized flooding as the result. When used at locations that are open to vehicle traffic, this device will encroach into the traveled way. If the curb inlet is not a recessed type inlet a traffic barricade shall be placed at each end of the inlet protection device.

5. DESIGN CRITERIA

- A. Drainage Area - 2.0 acres or less.
- B. Height - 6" (Maximum).

6. MATERIAL SPECIFICATIONS

- A. Concrete Block - ASTM C 139, Concrete Masonry Unit for Construction.
- B. Wire Fabric - Standard galvanized hardware fabric with 1/2" by 1/2" openings.
- C. Filter Stone - NCTCOG Specification 2.1.8(e).
- D. Wire Mesh - Welded wire fabric conforming to NCTCOG Specification 2.2.7 maximum opening 6"x6".

7. MAINTENANCE REQUIREMENTS - Curb inlet protection should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the storage area when the depth of sediment has built up to one-half of the storage depth. If de-watering of the storage volume is not occurring, clean or replace the filter stone. Clean the filter stone surface the first few times by raking. Repeated sediment build-up will require filter stone replacement.

These plans and related specifications were prepared for construction of this specific project only. Reuse of these plans for any other project without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

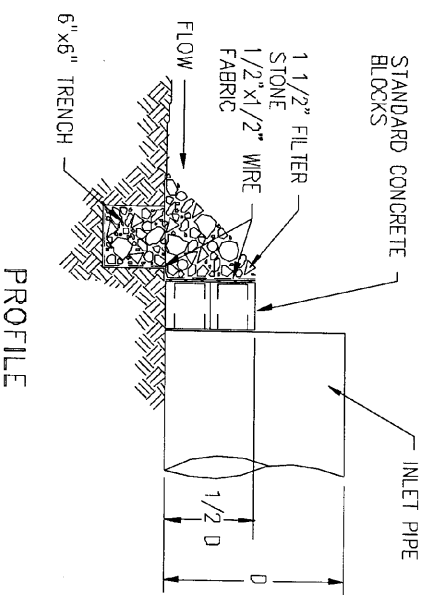
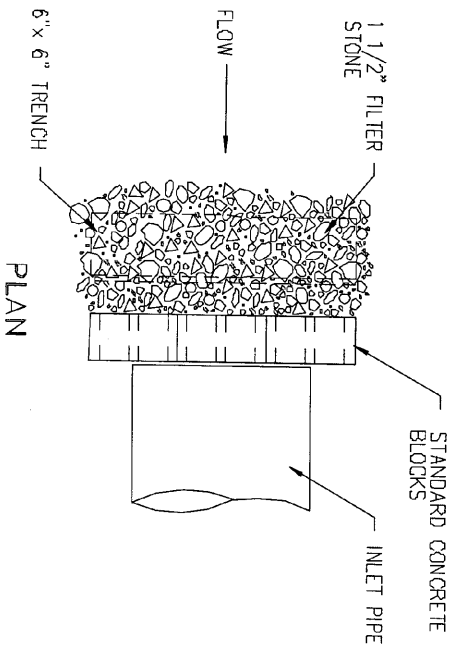
**ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO APAPAHO ROAD PHASE I
STORM WATER POLLUTION PREVENTION PLAN DETAILS**

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
DALLAS, TEXAS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.
DATE: 10/31/06



DESIGNED BY: J.W.B. PROJECT: 2002 102 SHEET NO. 49
DRAWN BY: TJH DATE: SEPTEMBER 2006 OF 88 SHEETS



CINDER BLOCK PIPE INLET PROTECTION

N.T.S.

5.11 PIPE INLET PROTECTION

1. **DESCRIPTION** - A temporary sediment control barrier made of standard concrete block and filter stone or stone rip-rap and filter stone surrounding the inlet end of a storm drain pipe or inlet pipe headwall.
2. **PURPOSE** - To remove sediment from storm runoff before it enters into the storm drain system.
3. **APPLICATIONS** - Where existing or proposed storm drain pipes or culverts are to be used prior to final stabilization of the area draining to the pipe inlet. This method is used where the pipe inlet will collect relatively heavy stormwater flows and overflow capability is needed.
4. **LIMITATIONS** - Ponding will occur around the pipe inlet with possible localized flooding as the result. Excavation of a sediment storage area can make final channel stabilization difficult and may create a separate erosion problem if not properly constructed. Do not use Cinder Block Pipe Inlet Protection for pipes larger than 36" in diameter.
5. **DESIGN CRITERIA** -
 - A. Volume - 1800 cubic feet per acre of drainage area.
 - B. Side Slopes - 1.5H:1V or flatter.
 - C. Top of Stone and Sediment Storage - 1/2" of inlet pipe diameter.
6. **MATERIAL SPECIFICATIONS** -
 - A. Concrete Block - ASTM C 139, Concrete Masonry Unit for Construction.
 - B. Wire Fabric - Standard galvanized hardware fabric with 1/2" by 1/2" openings.
 - C. Filter Stone - NCTCOG Specification 2.1.8.(e).
 - D. Stone Rip-Rap - NCTCOG Specification 2.1.6.(b)(2), Type A.
7. **MAINTENANCE REQUIREMENTS** - Pipe inlet protection should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the sediment storage area when the depth of sediment has built up to one-half of the design depth. If de-watering of the storage volume is not occurring, clean or replace the filter stone surrounding the pipe inlet. Clean the stone surface the first few times by raking. Repeated sediment build-up will require filter stone replacement.

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



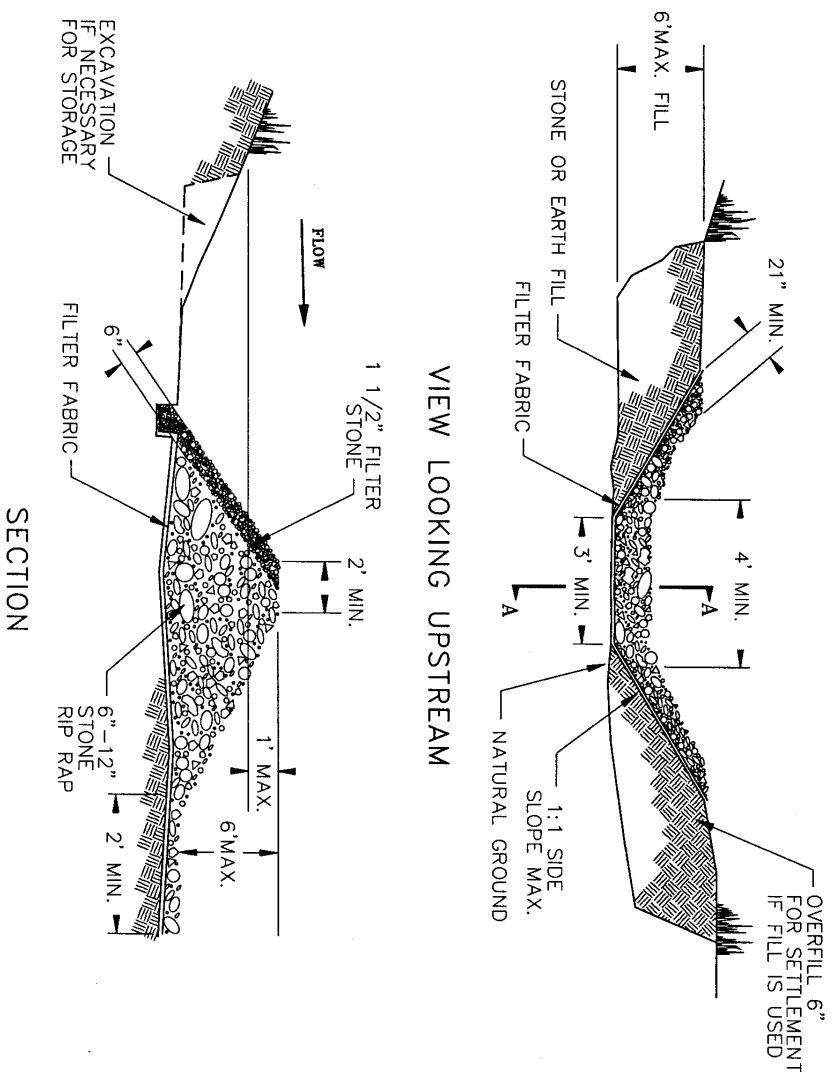
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM WATER POLLUTION PREVENTION PLAN DETAILS

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
 CONSULTING ENGINEERS
 Dallas, Texas

These plans and related specifications were prepared for construction of this project. They are not to be used for any other purpose without the written authorization of Birkhoff, Hendricks, & Conway, L.L.P.

DESIGNED BY: J.W.B.	PROJECT: 2002 102	SHEET NO. 50
DRAWN BY: TJH	DATE: SEPTEMBER 2006	OF 88 SHEETS



STONE OUTLET SEDIMENT TRAP
N.T.S.

5.13 STONE OUTLET SEDIMENT TRAP

1. **DESCRIPTION** - A ponding area formed by placing an earth and/or stone embankment across a drainageway or swale. The ponding area may be natural or improved to provide the required storage volume.
2. **PURPOSE** - To detain sediment laden runoff long enough to allow the majority of the sediment to settle from the water and to allow diffused runoff from the outlet.
3. **APPLICATIONS** - Normally used where the natural topography allows for the construction of the embankment to form the ponding area. Diversions, drainage improvements, and localized grading will allow placement in almost any location that has adequate space for the storage area and will accept the runoff from the disturbed site. The stone outlet sediment trap can be used instead of the standard sediment basin.
4. **LIMITATIONS** - Do not place device in a live stream. Avoid placing in areas planned for future improvements such as pavement or buildings. Inlet channels or pipe should be located as far away from the stone outlet as is practicable to allow for maximum sediment settling time in the basin.
5. **DESIGN CRITERIA** -
 - A. Drainage Area - 30 acres, maximum.
 - B. Storage Volume - 1800 cubic feet per acre of disturbed land draining to the device.
 - C. Surface Area of Storage Area - 1% (0.01) of the area draining to the device.
 - D. Embankment Height - 6 feet (maximum) to top.
 - E. Embankment Slopes - 1.5H:1V or flatter.
 - F. Embankment Top Width - 2 feet (minimum)
 - G. Stone Outlet Width - 4 feet (minimum)
 - H. Outlet Capacity - 10-year design storm, C = 0.50, Max. Tc = 15 minutes.
 - I. Freeboard @ Design Flow - 6 inches.
6. **MATERIAL SPECIFICATIONS** -
 - A. Stone Rip-Rap - NCTCOG Specification 2.1.6.(b)(2), Type A or re-cycled concrete meeting the same gradation.
 - B. Filter Stone - NCTCOG Specification 2.1.8.(e).
 - C. Filter Fabric - NCTCOG Specification 2.23.4.
7. **MAINTENANCE REQUIREMENTS** - Stone outlet sediment traps should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the storage area when the depth of sediment has built up to one-half the height of the stone outlet. Inspect the downstream base of the stone outlet and the downstream flow channel to ensure that no excessive erosion or gullies have developed and repair as necessary. The sediment storage area should drain within 48 to 72 hours after a rain event. The filter stone on the upstream face of the stone outlet may require cleaning or replacement if standing water remains for longer periods.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

John W. Birkhoff

DATE: 10/31/06



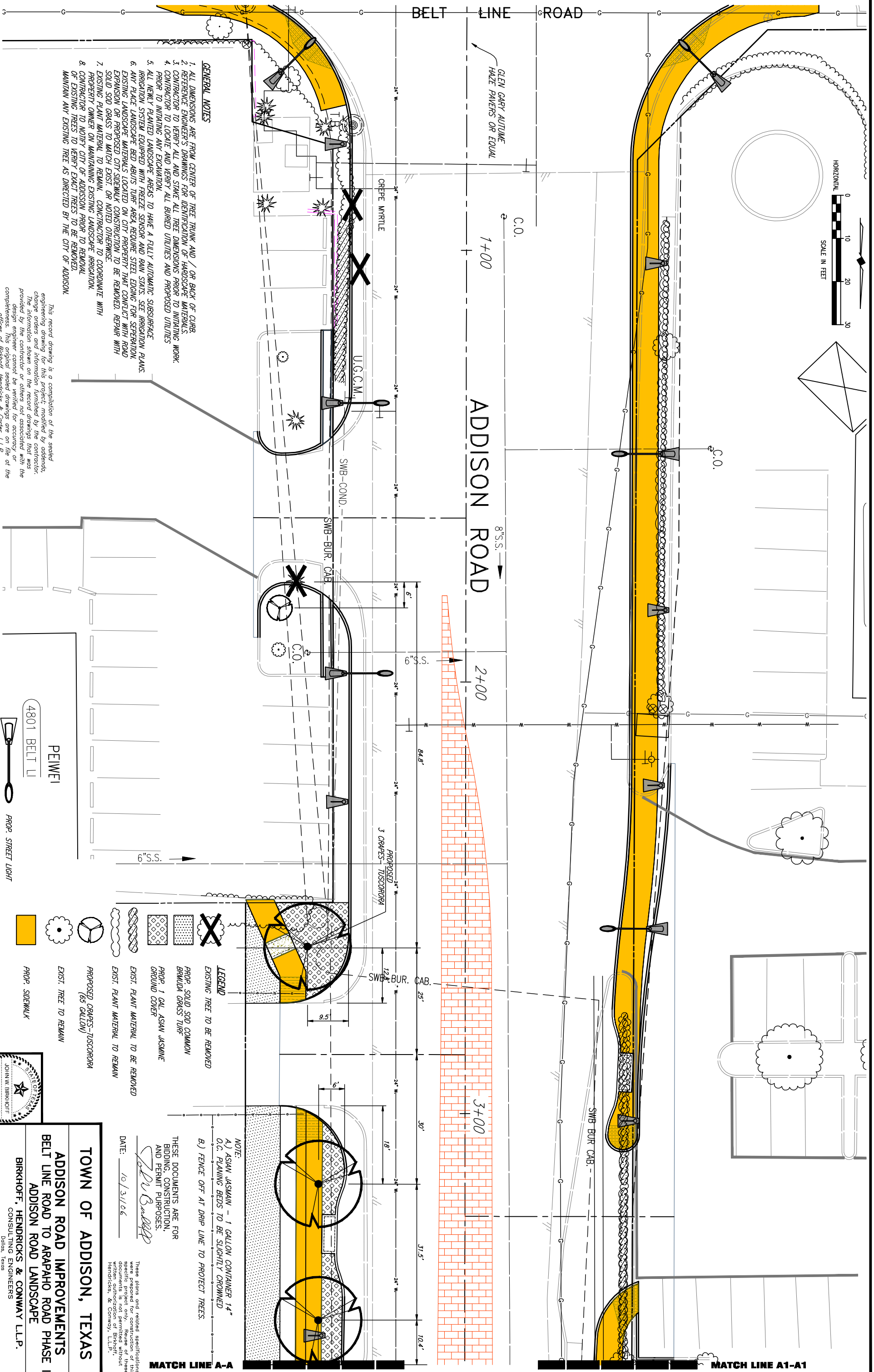
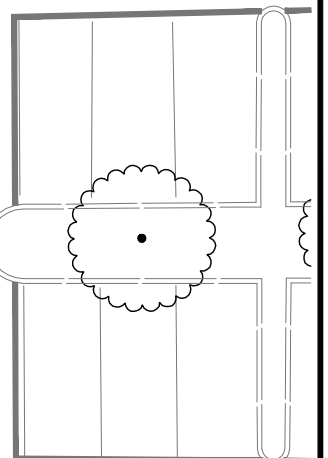
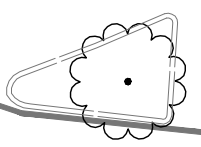
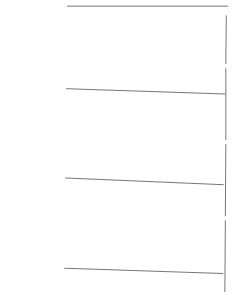
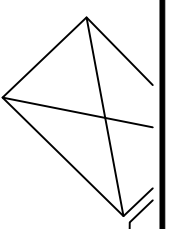
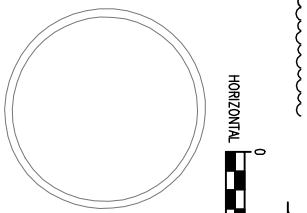
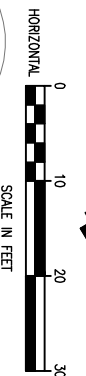
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
STORM WATER POLLUTION PREVENTION PLAN DETAILS

BIRKHOFF, HENDRICKS & CONWAY L. L. P.
CONSULTING ENGINEERS
DALLAS, TEXAS

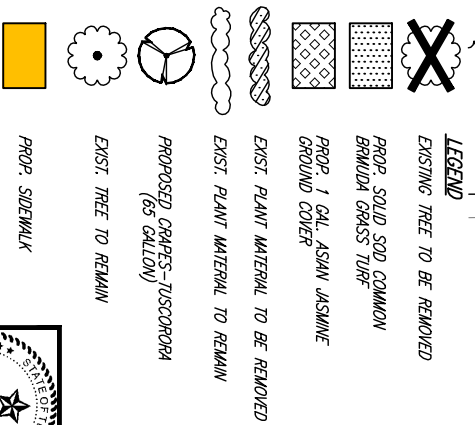
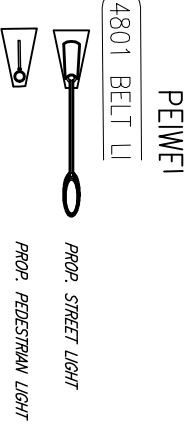
DESIGNED BY: <u>J.W.B.</u>	PROJECT: <u>2002_102</u>	SHEET NO. <u>51</u>
DRAWN BY: <u>TJH</u>	DATE: <u>SEPTEMBER 2006</u>	OF <u>88</u> SHEETS

These plans and related specifications are the property of Birkhoff, Hendricks & Conway, L.L.P. and are to be used only for the specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.



- GENERAL NOTES**
1. ALL DIMENSIONS ARE FROM CENTER OF TREE TRUNK AND / OR BACK OF CURB.
 2. REFERENCE ENGINEER'S DRAWINGS FOR IDENTIFICATION OF LANDSCAPE MATERIALS.
 3. CONTRACTOR TO VERIFY ALL AND STAKE ALL TREE DIMENSIONS PRIOR TO INITIATING WORK.
 4. CONTRACTOR TO LOCATE AND VERIFY ALL BURIED UTILITIES AND PROPOSED UTILITIES PRIOR TO INITIATING ANY EXCAVATION.
 5. ALL NEWLY PLANTED LANDSCAPE AREAS TO HAVE A FULLY AUTOMATIC SUBSURFACE IRRIGATION SYSTEM EQUIPPED WITH FREEZE SENSOR AND RAIN SENS. SEE IRRIGATION PLANS.
 6. ANY PLACE LANDSCAPE BED ABUTS TURF AREA, REQUIRE STEEL EDGING FOR SEPARATION. EXISTING LANDSCAPE MATERIALS LOCATED ON CITY PROPERTY THAT CONFLICT WITH ROAD EXPANSION OR PROPOSED CITY SIDEWALK CONSTRUCTION TO BE REMOVED. REPAIR WITH SOLID SOD GRASS TO MATCH EXIST. OR NOTED OTHERWISE.
 7. EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER ON MAINTAINING EXISTING LANDSCAPE IRRIGATION.
 8. CONTRACTOR TO NOTIFY CITY OF ADDISON PRIOR TO REMOVAL OF EXISTING TREES TO VERIFY EXACT TREES TO BE REMOVED. MAINTAIN ANY EXISTING TREE AS DIRECTED BY THE CITY OF ADDISON.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.M.B. DATE 05/04/2010



NOTE:
 A.) ASIAN JASMINE - 1 GALLON CONTAINER 14"
 O.C. PLANTING BEDS TO BE SLIGHTLY CROWNED
 B.) FENCE OFF AT DRIP LINE TO PROTECT TREES.

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 10/31/06

These plans and related specifications were prepared for construction of this project. The information shown on these documents is not permitted without written authorization of Birkhoff, Hendricks, & Conway, L.L.P.



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD LANDSCAPE

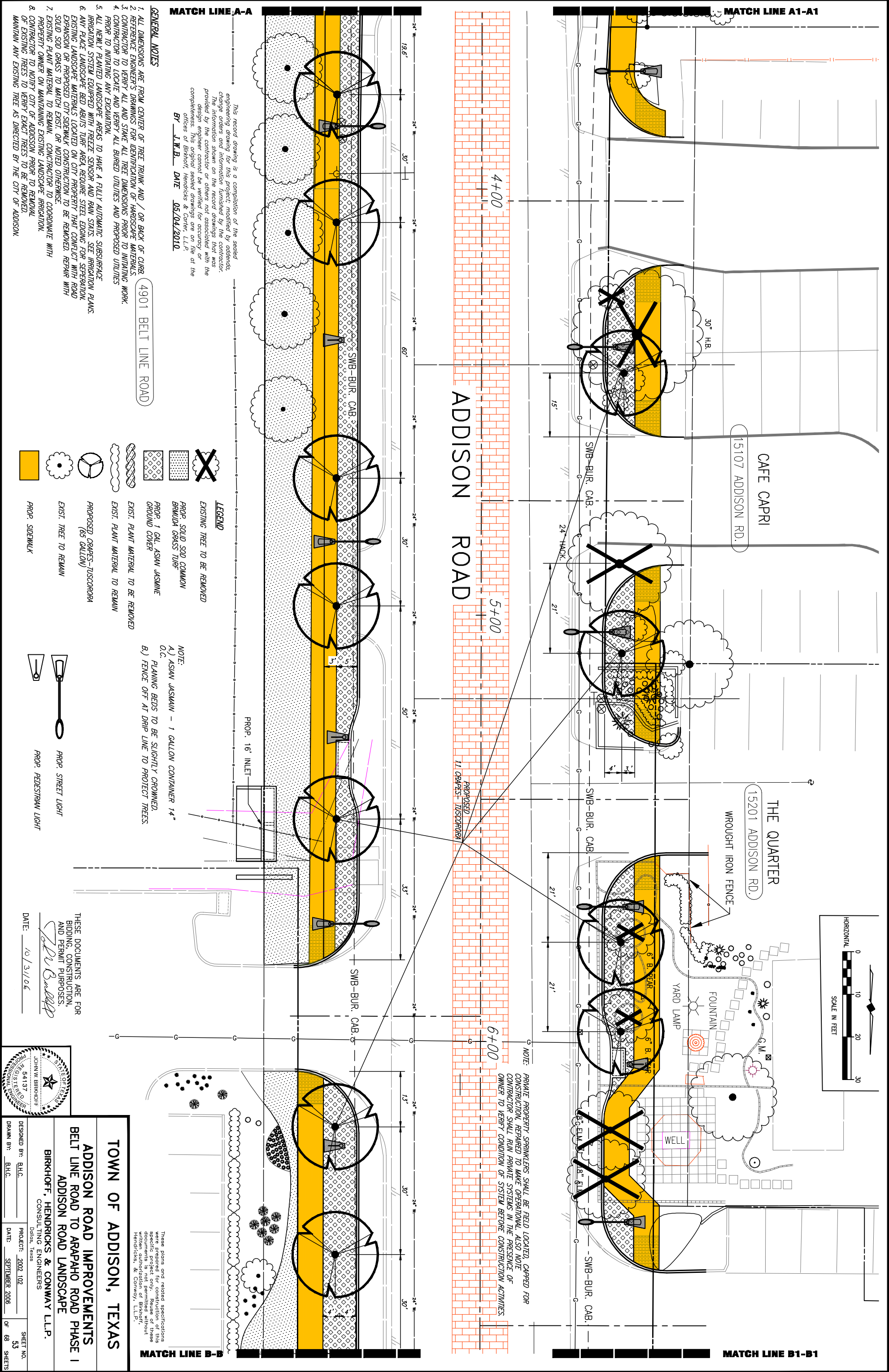
BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: B.H.C.
 DRAWN BY: B.H.C.
 PROJECT: 2002_102
 DATE: SEPTEMBER 2006

SHEET NO. 52
 OF 68 SHEETS

MATCH LINE A-A

MATCH LINE A1-A1



- GENERAL NOTES**
1. ALL DIMENSIONS ARE FROM CENTER OF TREE TRUNK AND / OR BACK OF CURB.
 2. REFERENCE ENGINEER'S DRAWINGS FOR IDENTIFICATION OF HARDSCAPE MATERIALS.
 3. CONTRACTOR TO VERIFY ALL AND STAKE ALL TREE DIMENSIONS PRIOR TO INITIATING WORK.
 4. CONTRACTOR TO LOCATE AND VERIFY ALL BURIED UTILITIES AND PROPOSED UTILITIES PRIOR TO INITIATING ANY EXCAVATION.
 5. ALL NEWLY PLANTED LANDSCAPE AREAS TO HAVE A FULLY AUTOMATIC SUBSURFACE IRRIGATION SYSTEM EQUIPPED WITH FREEZE SENSOR AND RAIN STATS. SEE IRRIGATION PLANS.
 6. ANY PLACE LANDSCAPE BED ABUTS TURF AREA REQUIRE STEEL EDGING FOR SEPARATION. EXISTING LANDSCAPE MATERIALS LOCATED ON CITY PROPERTY THAT CONFLICT WITH ROAD EXPANSION OR PROPOSED CITY SIDEWALK CONSTRUCTION TO BE REMOVED. REPAIR WITH SOLID SOD GRASS TO MATCH EXIST. OR NOTED OTHERWISE.
 7. EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER ON MAINTAINING EXISTING LANDSCAPE IRRIGATION.
 8. CONTRACTOR TO NOTIFY CITY OF ADDRESS PRIOR TO REMOVAL OF EXISTING TREES TO VERIFY EXACT TREES TO BE REMOVED. MAINTAIN ANY EXISTING TREE AS DIRECTED BY THE CITY OF ADDISON.

This record drawing is a completion of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the engineering firm is the responsibility of the contractor. The original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P. BY J.W.B. DATE 05/04/2010

4901 BELT LINE ROAD

ADDISON ROAD

15107 ADDISON RD.
CAFE CAPRI

15201 ADDISON RD.
THE QUARTER

WROUGHT IRON FENCE
FOUNTAIN
YARD LAMP
WELL

MATCH LINE A-A

MATCH LINE B1-B1

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

24" W.

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

24" W.

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

24" W.

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

19.6'

30'

24" W.

60'

30'

24" W.

50'

33.5'

24" W.

- LEGEND**
- EXISTING TREE TO BE REMOVED
 - PROP. SOLID SOD COMMON BRAWLIA GRASS TURF
 - PROP. 1 GAL. ASIATIC JASMINE GROUND COVER
 - EXIST. PLANT MATERIAL TO BE REMOVED
 - EXIST. PLANT MATERIAL TO REMAIN
 - PROPOSED CRAPES-TUSCORORA (65 GALLON)
 - EXIST. TREE TO REMAIN
 - PROP. SIDEWALK

- NOTE:**
- A.) ASIATIC JASMINE - 1 GALLON CONTAINER 14"
 - O.C. PLANNING BEDS TO BE SLIGHTLY CROWNED.
 - B.) FENCE OFF AT DRIP LINE TO PROTECT TREES.

- PROP. 16" INLET
- PROP. STREET LIGHT
- PROP. PEDESTRIAN LIGHT

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DATE: 10/3/06

JOHN W. BIRKHOFF
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
NO. 44137
EXPIRES 09/01/10

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS

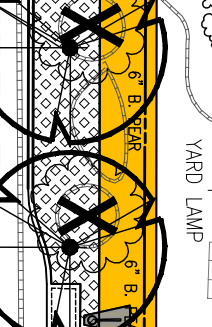
BELT LINE ROAD TO ARAPAHO ROAD PHASE I

ADDISON ROAD LANDSCAPE

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: B.H.C.
DRAWN BY: B.H.C.
PROJECT: 2002.102
DATE: SEPTEMBER 2006

SHEET NO. 53
OF 68 SHEETS



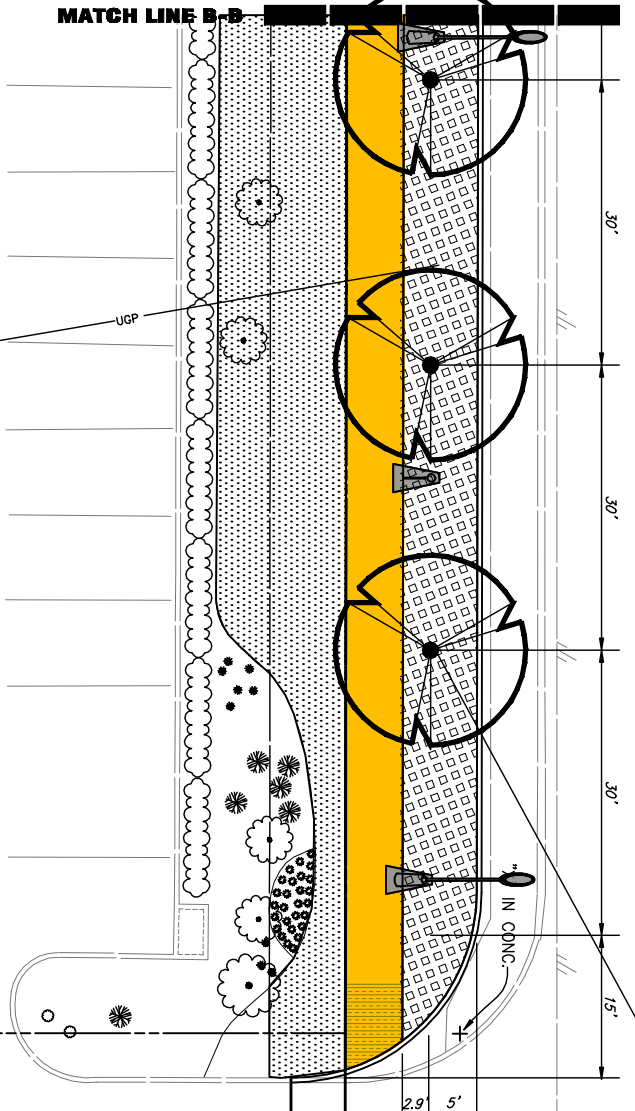
PRIVATE PROPERTY SPRINKLERS SHALL BE FIELD LOCATED, GAPPED FOR CONSTRUCTION, REPAIRED TO MAKE OPERATIONAL. ALSO NOTE CONTRACTOR SHALL RUN PRIVATE SYSTEMS IN THE PRESENCE OF OWNER TO VERIFY CONDITION OF SYSTEM BEFORE CONSTRUCTION ACTIVITIES.

STEAK HOUSE

ADDISON RD.

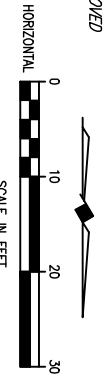
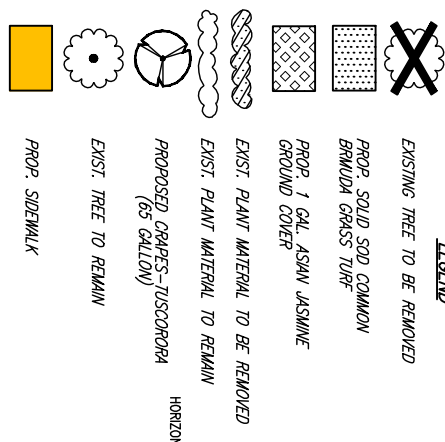
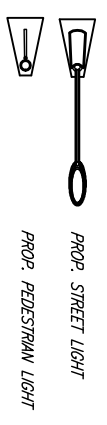
This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P. BY J.W.B. DATE 05/04/2010

MATCH LINE B-B



BIDJARR BOUTIQUE HOTELS, LTD.
15200 ADDISON RD., SUITE

NOTE:
A.) ASIAN JASMINE - 1 GALLON CONTAINER 14" O.C.
PLANTING BEDS TO BE SLIGHTLY CROWNED.
B.) FENCE OFF AT DRAIN LINE TO PROTECT TREES.



These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD LANDSCAPE

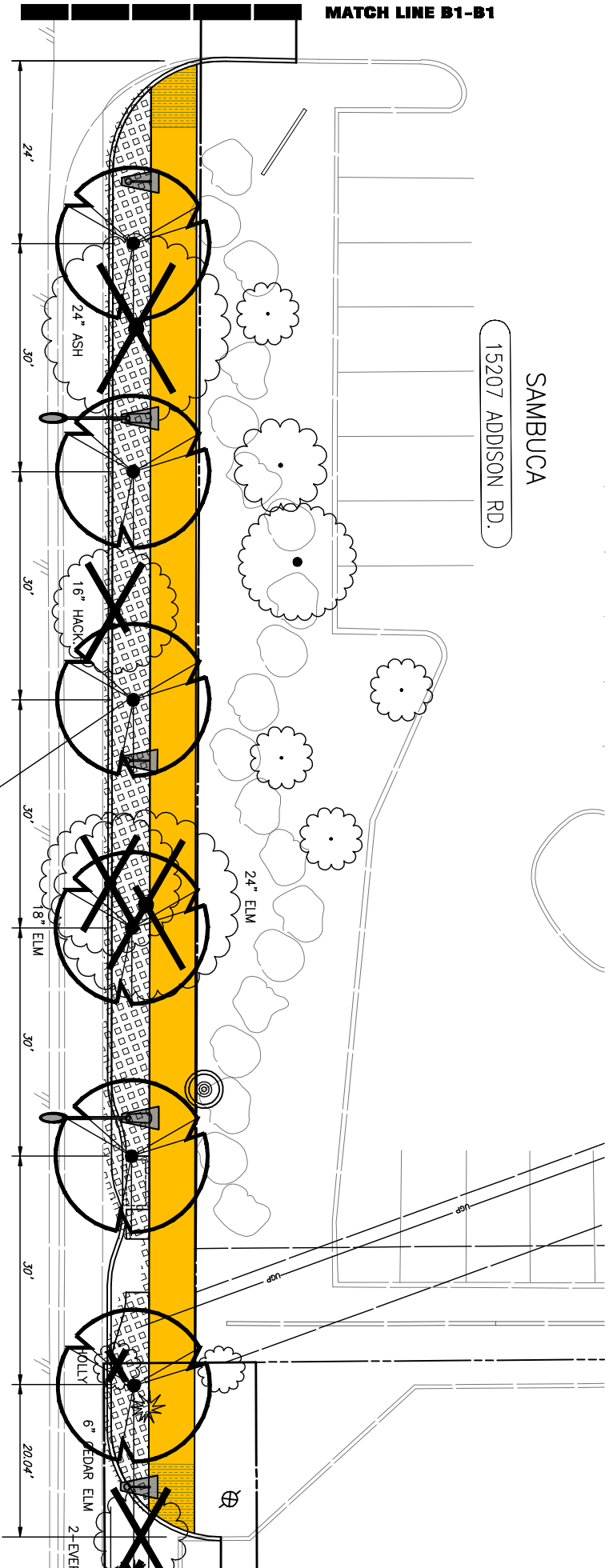
DESIGNED BY: B.H.C.
PROJECT: 2002_102
DATE: SEPTEMBER 2006



DATE: 10/3/10
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas
SHEET NO. 54 OF 68 SHEETS

SAMBUCA
15207 ADDISON RD.

MATCH LINE B1-B1



ADDISON ROAD

7+00

8+00

9+00

PROPOSED
14 GRAPES-TUSCORORA

- 1. ALL DIMENSIONS ARE FROM CENTER OF TREE TRUNK AND / OR BACK OF CURB.
- 2. REFERENCE ENGINEER'S DRAWINGS FOR IDENTIFICATION OF HARDSCAPE MATERIALS.
- 3. CONTRACTOR TO VERIFY ALL AND STAKE ALL TREE DIMENSIONS PRIOR TO INITIATING WORK.
- 4. CONTRACTOR TO LOCATE AND VERIFY ALL BURIED UTILITIES AND PROPOSED UTILITIES PRIOR TO INITIATING ANY EXCAVATION.
- 5. ALL NEWLY PLANTED LANDSCAPE AREAS TO HAVE A FULLY AUTOMATIC SUBSURFACE IRRIGATION SYSTEM EQUIPPED WITH FREEZE SENSOR AND RAIN SENS. SEE IRRIGATION PLANS.
- 6. ANY PLACE LANDSCAPE BED ABUTS TURF AREA, REQUIRE STEEL EDGING FOR SEPARATION. EXISTING LANDSCAPE MATERIALS LOCATED ON CITY PROPERTY THAT CONFLICT WITH ROAD EXPANSION OR PROPOSED CITY SIDEWALK CONSTRUCTION TO BE REMOVED. REPAIR WITH SOLID SOD GRASS TO MATCH EXIST. OR NOTED OTHERWISE.
- 7. EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER ON MAINTAINING EXISTING LANDSCAPE IRRIGATION.
- 8. CONTRACTOR TO NOTIFY CITY OF ADDISON PRIOR TO REMOVAL OF EXISTING TREES TO VERIFY EXACT TREES TO BE REMOVED.
- 9. CONTRACTOR TO MAINTAIN ANY EXISTING TREE AS DIRECTED BY THE CITY OF ADDISON.

GENERAL NOTES

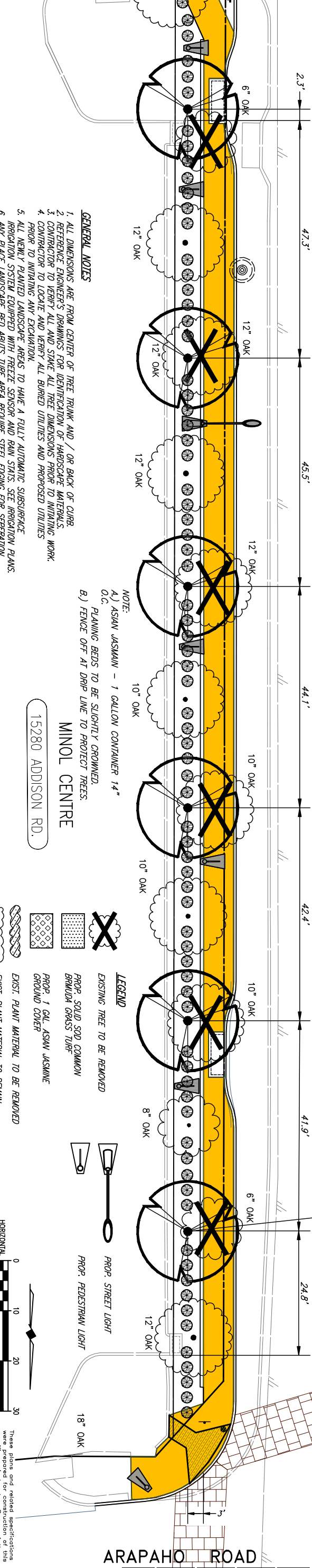
24" COTTONWOOD

MATCH LINE C1-C1

MATCH LINE C-C

MATCH LINE C-C

MATCH LINE C1-C1



ADDISON ROAD 12+00

ARAPAHO ROAD 13+0

- GENERAL NOTES**
1. ALL DIMENSIONS ARE FROM CENTER OF TREE TRUNK AND / OR BACK OF CURB.
 2. REFERENCE ENGINEER'S DRAWINGS FOR IDENTIFICATION OF HARDSCAPE MATERIALS.
 3. CONTRACTOR TO VERIFY ALL AND STAKE ALL TREE DIMENSIONS PRIOR TO INITIATING WORK.
 4. CONTRACTOR TO LOCATE AND VERIFY ALL BURIED UTILITIES AND PROPOSED UTILITIES PRIOR TO INITIATING ANY EXCAVATION.
 5. ALL NEWLY PLANTED LANDSCAPE AREAS TO HAVE A FULLY AUTOMATIC SUBSURFACE IRRIGATION SYSTEM EQUIPPED WITH FREEZE SENSOR AND RAIN STAIRS. SEE IRRIGATION PLANS.
 6. ANY PLAGE LANDSCAPE BED ABOUTS TURN AREA REQUIRE STEEL EDGING FOR SEPARATION. EXISTING LANDSCAPE MATERIALS LOCATED ON CITY PROPERTY THAT CONFLICT WITH ROAD EXPANSION OR PROPOSED CITY SIDEWALK CONSTRUCTION TO BE REMOVED. REPAIR WITH SOLID SOD GRASS TO MATCH EXIST. OR NOTED OTHERWISE.
 7. EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER ON MAINTAINING EXISTING LANDSCAPE IRRIGATION.
 8. CONTRACTOR TO NOTIFY CITY OF ADDISON PRIOR TO REMOVAL OF EXISTING TREES TO VERIFY EXACT TREES TO BE REMOVED. MAINTAIN ANY EXISTING TREE AS DIRECTED BY THE CITY OF ADDISON.

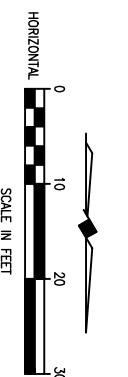
NOTE:
 A.) ASIAN JASMINE - 1 GALLON CONTAINER 14" O.C.
 B.) FENCE OFF AT DRIP LINE TO PROTECT TREES.

MINOL CENTRE
 15280 ADDISON RD.

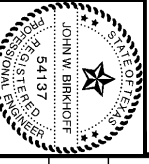
This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.W.B. DATE 05/04/2010

- LEGEND**
- EXISTING TREE TO BE REMOVED
 - PROP. SOLID SOD COMMON BRUIDA GRASS TURF
 - PROP. 1 GAL. ASIAN JASMINE GROUND COVER
 - EXIST. PLANT MATERIAL TO BE REMOVED
 - EXIST. PLANT MATERIAL TO REMAIN
 - PROPOSED CRAPES-TUSCORORA (65 GALLON)
 - PROPOSED LOROPETALUM BUSH (CHINESE FRINGE) (5 GALLON, 3" O.C.)
 - EXIST. TREE TO REMAIN
 - PROP. SIDEWALK

- PROP. STREET LIGHT
- PROP. PEDESTRIAN LIGHT



These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without Birkhoff, Hendricks & Conway, L.L.P.



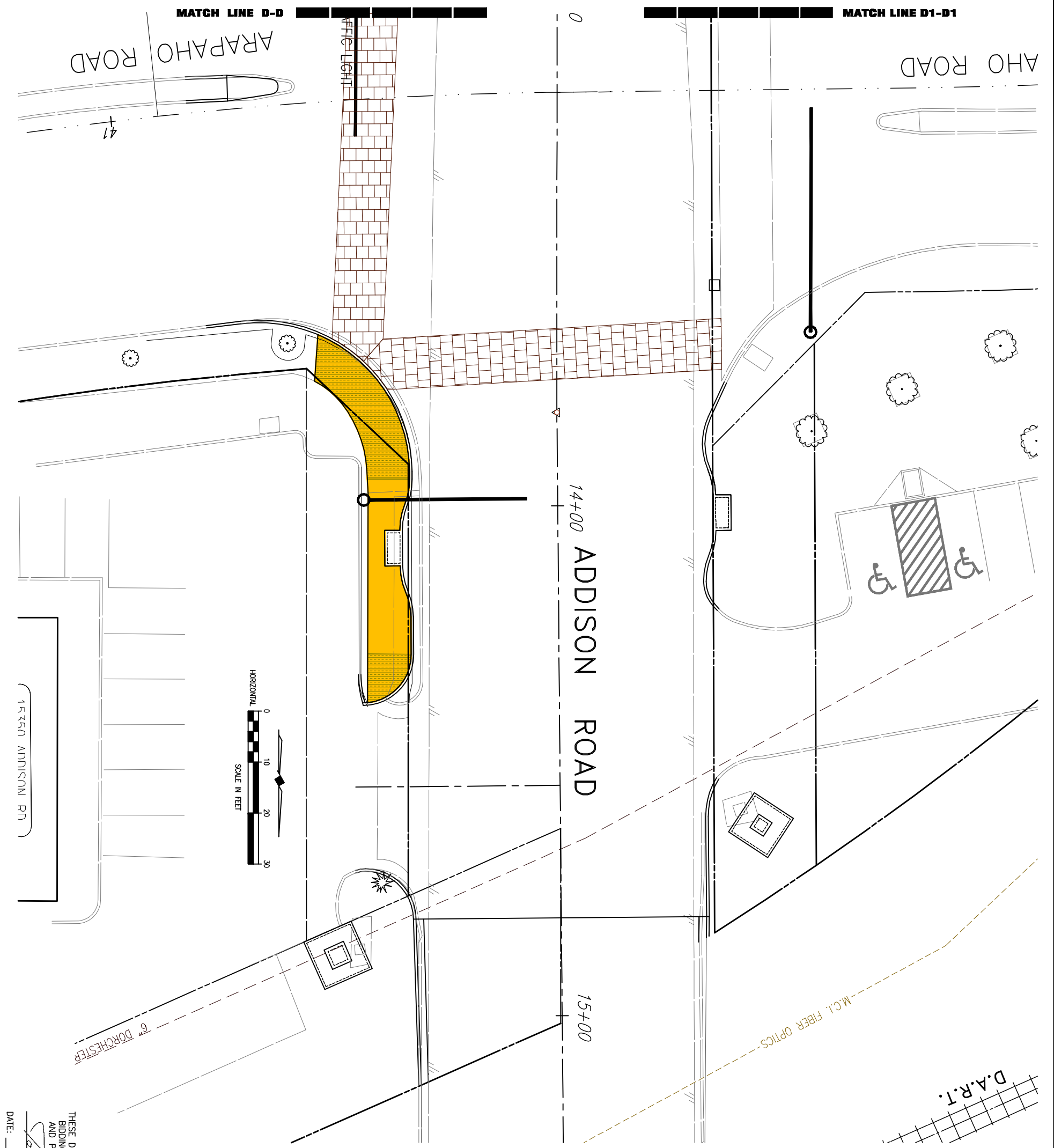
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD LANDSCAPE

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS

DESIGNED BY: B.H.C.
 DRAWN BY: B.H.C.
 PROJECT: 2002 102
 DATE: SEPTEMBER 2006

SHEET NO. 55
 OF 68 SHEETS



LANDSCAPE BEDS NOTES

IF MAKING A NEW BED IN AN AREA COVERED WITH GRASS AND WEEDS, KILL THE UNWANTED PLANTS BY SPRAYING WITH A GLYPHOSATE PRODUCT (E.G. ROUNDUP) WHEN THE GRASS AND WEEDS ARE ACTIVELY GROWING. TWO APPLICATIONS ARE USUALLY REQUIRED TO KILL DIFFICULT WEEDS SUCH AS BERMUDAGRASS. HEAD AND FOLLOW ALL LABEL DIRECTIONS.

CONSTRUCT RAISED BEDS, THE CENTERS OF WHICH ARE 3 INCHES ABOVE THE SURROUNDING SOIL. DURING FINAL SHAPING, THE BED SHOULD BE CROWNED (I.E. MADE 3 INCHES HIGHER IN THE CENTER THAN AT THE EDGES), IN ORDER TO HELP DRAIN AWAY EXCESS WATER.

TO FILL BEDS:
ADD 3 INCHES OF EXPANDED SHALE (E.G. TRUGRO SOIL CONDITIONER), TILL IN TO A DEPTH OF 8-10 INCHES.

ADD 3 INCHES OF FINISHED COMPOST, TILL IN TO A DEPTH OF 8-10 INCHES.

AFTER READING AND FOLLOWING ALL LABEL DIRECTIONS, ADD APPROPRIATE FERTILIZER.

TURF GRASS NOTES

REMOVE ANY UNWANTED VEGETATION WITH PRODUCTS SUCH AS ROUNDUP OR FINALE. NOTE, FOR DIFFICULT TO CONTROL WEEDS SUCH AS BERMUDAGRASS IT MAY TAKE SEVERAL APPLICATIONS TO EFFECTIVELY REMOVE THESE HARD TO CONTROL WEEDS. KEY IS TO ALLOW ENOUGH TIME PRIOR TO PLANTING TO EFFECTIVELY REMOVE THE WEEDS. FOR ROUNDUP AND FINALE, ALLOW 7 TO 10 DAYS PER APPLICATION OF THE HERBICIDE.

PRIOR TO PLANTING THE NEW LAWN, APPLY A TWO INCH LAYER OF ORGANIC MATERIAL TO THE SOIL SURFACE AND THEN TILL THE MATERIAL INTO THE TOP 4 TO 6 INCHES OF TOPSOIL.

TREE REMOVAL =



This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, LLP.
BY J.W.B. DATE 05/04/2010

These plans and related specifications were prepared for construction of this project. The use of these plans and related documents is not permitted without the written authorization of Birkhoff, Hendricks, & Conway, LLP.

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W. Birkhoff
DATE: 10/31/06



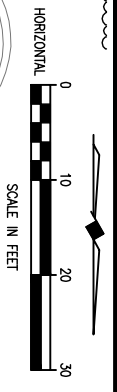
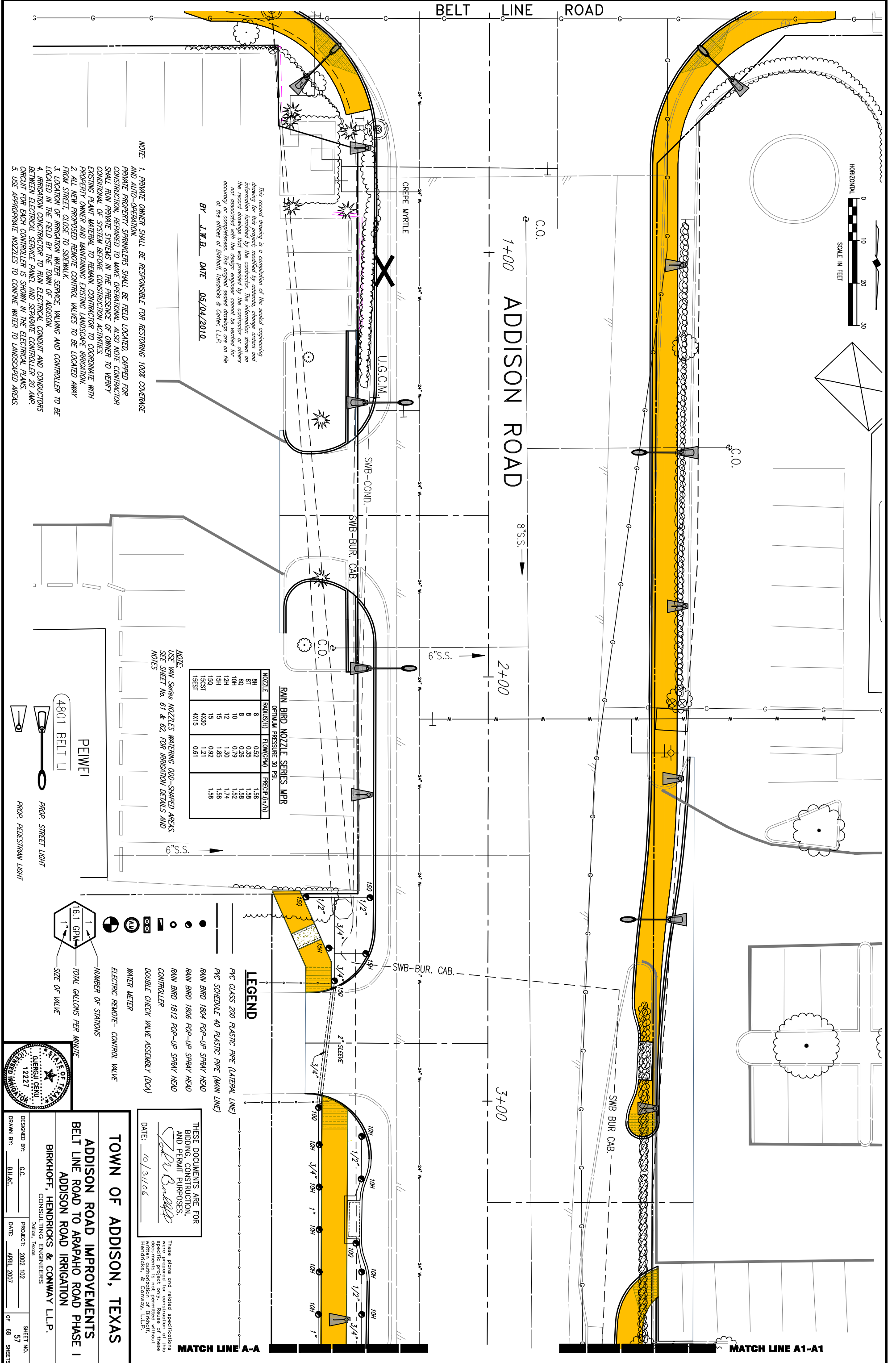
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD LANDSCAPE

BIRKHOFF, HENDRICKS & CONWAY LLP.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: B.H.C.
DRAWN BY: B.H.C.
PROJECT: 2002.102
DATE: SEPTEMBER 2006

SHEET NO. 56
OF 68 SHEETS



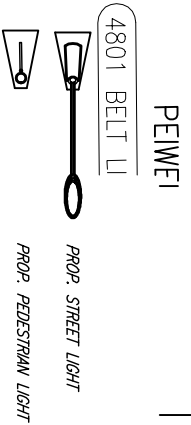
NOTE: 1. PRIVATE OWNER SHALL BE RESPONSIBLE FOR RESTORING 100% COVERAGE AND AUTO-OPERATION.
 PRIVATE PROPERTY SPRINKLERS SHALL BE FIELD LOCATED, CAPPED FOR CONSTRUCTION, REPAIRED TO MAKE OPERATIONAL. ALSO NOTE CONTRACTOR SHALL RUN PRIVATE SYSTEMS IN THE PRESENCE OF OWNER TO VERIFY CONDITIONAL OF SYSTEM BEFORE CONSTRUCTION ACTIVITIES.
 EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER AND MAINTAINING EXISTING LANDSCAPE IRRIGATION.
 2. ALL NEW PROPOSED REMOTE CONTROL VALVES TO BE LOCATED AWAY FROM STREET, CLOSE TO SIDEWALK.
 3. LOCATION OF IRRIGATION WATER SERVICE, VALVING AND CONTROLLER TO BE LOCATED IN THE FIELD BY THE TOWN OF ADDISON.
 4. IRRIGATION CONDUCTOR TO RUN ELECTRICAL CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL SERVICE PANEL AND SEPARATE CONTROLLER 20 AMP. CIRCUIT FOR EACH CONTROLLER IS SHOWN IN THE ELECTRICAL PLANS.
 5. USE APPROPRIATE NOZZLES TO CONTINUE WATER TO LANDSCAPED AREAS.

This record drawing is a completion of the sealed engineering drawing of this project, certified by addison, hendricks & conway, llp, on the date of this project. The accuracy of the information furnished on this drawing is the responsibility of the contractor or others not associated with the design engineer. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY J.W.B. DATE 05/04/2010

NOZZLE	RADIUS(R)	FLOW(GPM)	PRECIP.(in/h)
8H	8	0.52	1.58
8T	8	0.35	1.58
80	10	0.26	1.58
10H	10	0.79	1.52
12H	12	1.30	1.74
15H	15	1.85	1.58
150	15	0.92	1.58
150ST	4X30	1.21	1.58
150ST	4X15	0.61	1.58

NOTE: USE MAIN Series NOZZLES WATERING ODD-SHAPED AREAS. SEE SHEET No. 61 & 62, FOR IRRIGATION DETAILS AND NOTES



LEGEND

- PVC CLASS 200 PLASTIC PIPE (LATERAL LINE)
- PVC SCHEDULE 40 PLASTIC PIPE (MAIN LINE)
- RAIN BIRD 1804 POP-UP SPRAY HEAD
- RAIN BIRD 1806 POP-UP SPRAY HEAD
- RAIN BIRD 1812 POP-UP SPRAY HEAD
- DOUBLE CHECK VALVE ASSEMBLY (DCA)
- WATER METER
- ELECTRIC REMOTE- CONTROL VALVE
- NUMBER OF STATIONS
- TOTAL GALLONS PER MINUTE
- SIZE OF VALVE



THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W. Birkhoff
 DATE: 10/31/06

TOWN OF ADDISON, TEXAS

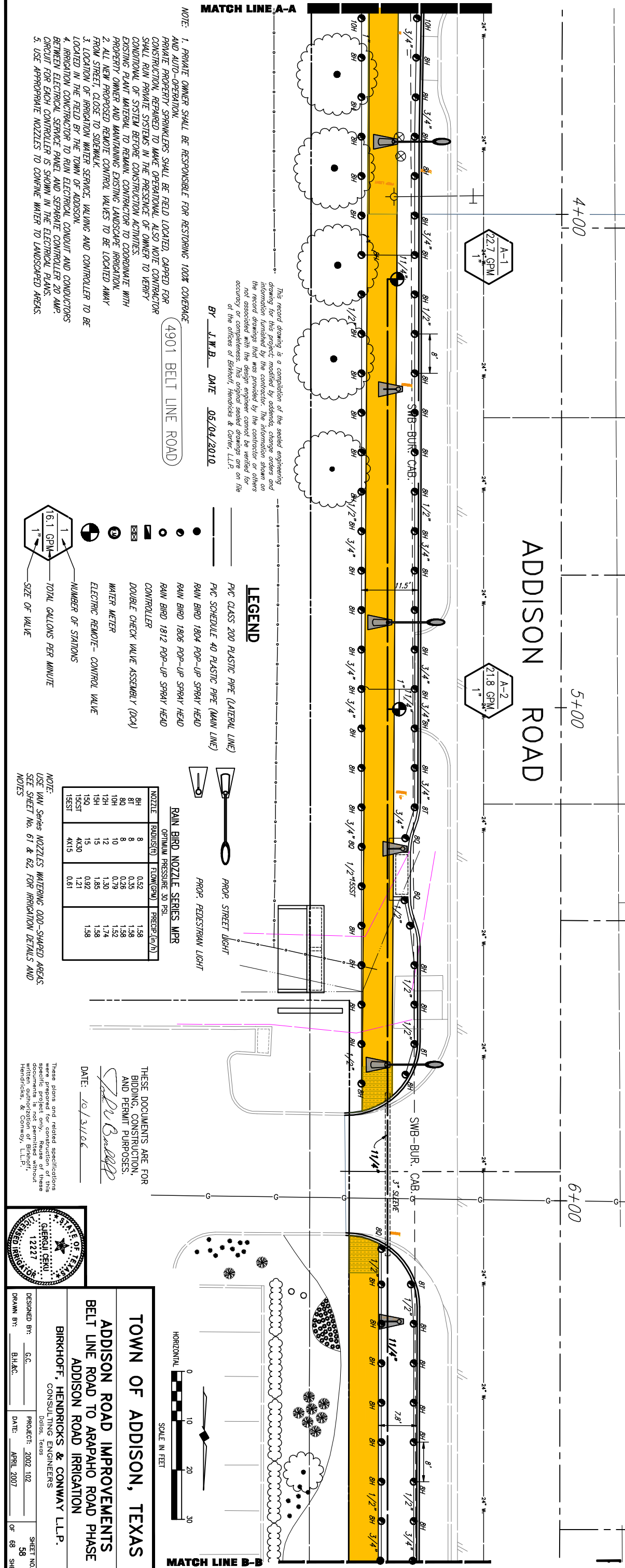
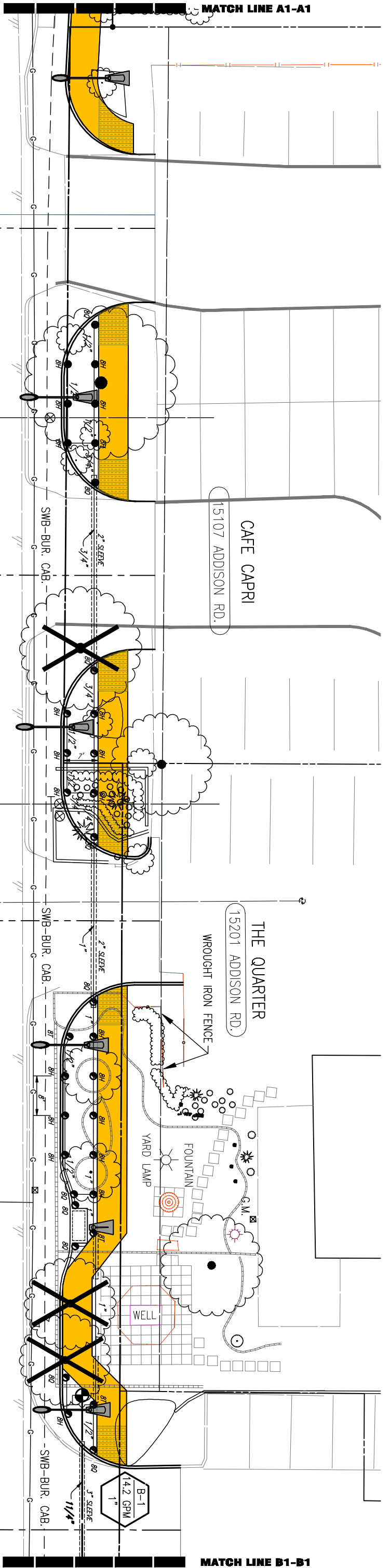
**ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 ADDISON ROAD IRRIGATION**

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS

DESIGNED BY: G.C.	PROJECT: 2002 102	SHEET NO. 57
DRAWN BY: B.L.R.C.	DATE: APRIL 2007	OF 68 SHEETS

MATCH LINE A-A

MATCH LINE A1-A1



This record drawing is a completion of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY **J.M.B.** DATE **05/04/2010**

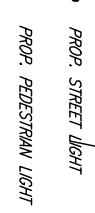
4901 BELT LINE ROAD

- NOTE: 1. PRIVATE OWNER SHALL BE RESPONSIBLE FOR RESTORING 100% COVERAGE AND AUTO-OPERATOR.
 PRIVATE PROPERTY SPRINKLERS SHALL BE FIELD LOCATED. CAPPED FOR CONSTRUCTION. PREPARED TO MAKE OPERATIONAL. ALSO NOTE CONTRACTOR SHALL RUN PRIVATE SYSTEMS IN THE PRESENCE OF OWNER TO VERIFY CONDITIONAL OF SYSTEM BEFORE CONSTRUCTION ACTIVITIES. EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER AND MAINTAINING EXISTING LANDSCAPE IRRIGATION.
 2. ALL NEW PROPOSED REMOTE CONTROL VALVES TO BE LOCATED AWAY FROM STREET, CLOSE TO SIDEWALK.
 3. LOCATION OF IRRIGATION WATER SERVICE, VALVING AND CONTROLLER TO BE LOCATED IN THE FIELD BY THE TOWN OF ADDISON.
 4. IRRIGATION CONDUCTOR TO RUN ELECTRICAL CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL SERVICE PANEL AND SEPARATE CONTROLLER 20 AMP. CIRCUIT FOR EACH CONTROLLER IS SHOWN IN THE ELECTRICAL PLANS.
 5. USE APPROPRIATE NOZZLES TO CONVEY WATER TO LANDSCAPED AREAS.

LEGEND

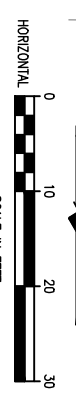
- PVC CLASS 200 PLASTIC PIPE (LATERAL LINE)
- PVC SCHEDULE 40 PLASTIC PIPE (MAIN LINE)
- RAIN BRD 1804 POP-UP SPRAY HEAD
- RAIN BRD 1806 POP-UP SPRAY HEAD
- RAIN BRD 1812 POP-UP SPRAY HEAD
- DOUBLE CHECK VALVE ASSEMBLY (DCA)
- WATER METER
- ELECTRIC REMOTE- CONTROL VALVE
- NUMBER OF STATIONS
- TOTAL GALLONS PER MINUTE
- SIZE OF VALVE

RAIN BIRD NOZZLE SERIES MPR			
NOZZLE	RADIUS (FT)	FLOW (GPM)	PREOP. (GAL)
81	8	0.52	1.58
82	8	0.35	1.58
80	10	0.26	1.58
10H	12	0.79	1.52
12H	12	1.30	1.74
15H	15	1.85	1.58
150	15	0.92	1.58
15CST	4X30	1.21	1.58
15EST	4X15	0.61	1.58



NOTE: USE VAN Series NOZZLES WATERING ODD-SHAPED AREAS. SEE SHEET No. 61 & 62 FOR IRRIGATION DETAILS AND NOTES

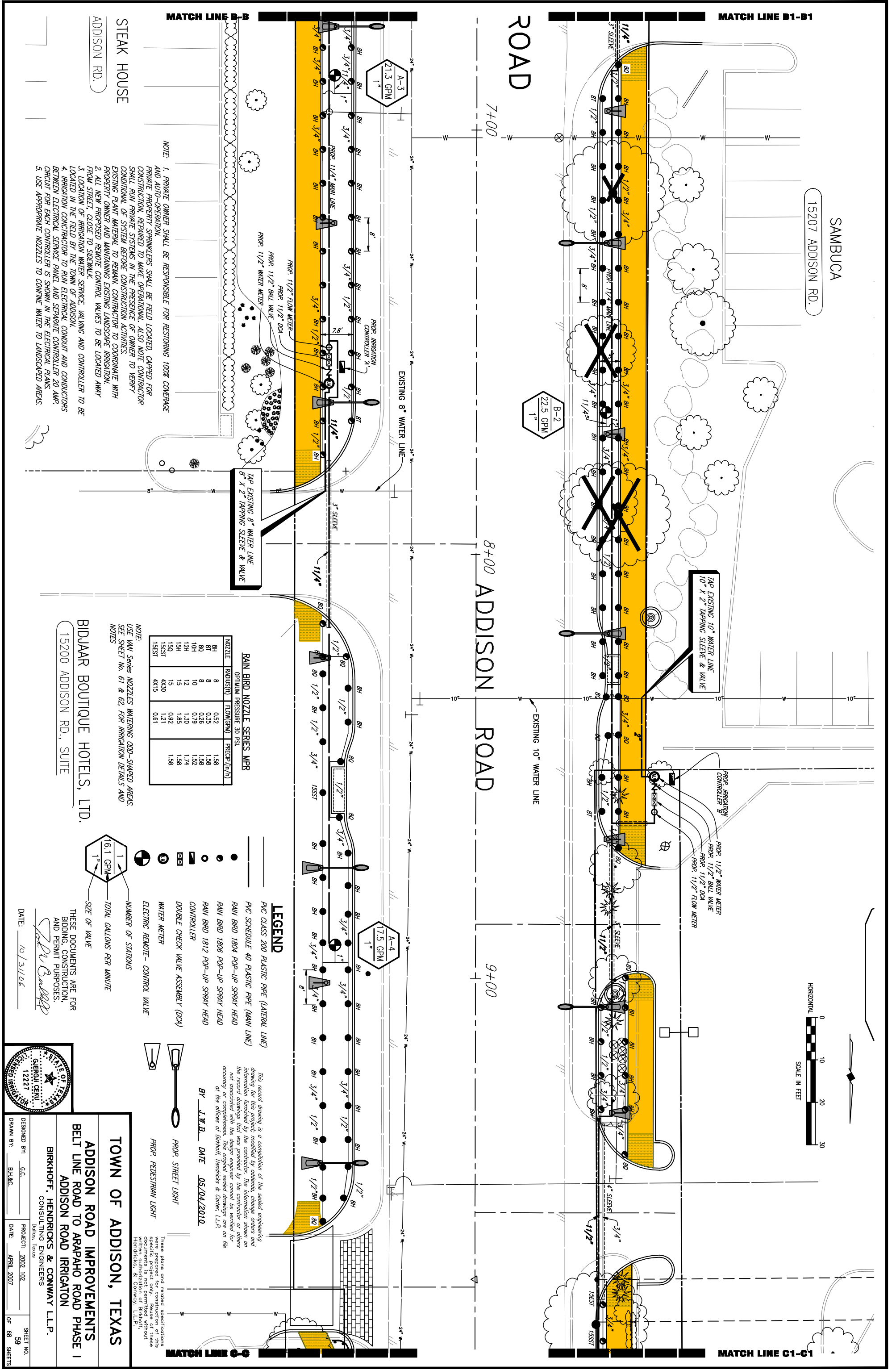
DATE: 10/3/10
 THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 ADDISON ROAD IRRIGATION

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas
 DESIGNED BY: G.C.
 DRAWN BY: B.H.&C.
 PROJECT: 2002.102
 DATE: APRIL 2007
 SHEET NO. 58
 OF 68 SHEETS



NOTE: 1. PRIVATE OWNER SHALL BE RESPONSIBLE FOR RESTORING 100% COVERAGE AND AUTO-OPERATION.
 PRIVATE PROPERTY SPRINKLERS SHALL BE FIELD LOCKED, CAPPED FOR CONSTRUCTION REPAIRED TO MAKE OPERATIONAL. ALSO NOTE CONTRACTOR SHALL RUN PRIVATE SYSTEMS IN THE PRESENCE OF OWNER TO VERIFY CONDITIONAL OF SYSTEM BEFORE CONSTRUCTION ACTIVITIES.
 2. ALL NEW PROPOSED REMOTE CONTROL VALVES TO BE LOCATED AWAY FROM STREET, CLOSE TO SIDEWALK.
 3. LOCATION OF IRRIGATION WATER SERVICE, VALVING AND CONTROLLER TO BE LOCATED IN THE FIELD BY THE TOWN OF ADDISON.
 4. IRRIGATION CONCRCTOR TO RUN ELECTRICAL CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL SERVICE PANEL AND SEPARATE CONTROLLER 20 AMP CIRCUIT FOR EACH CONTROLLER IS SHOWN IN THE ELECTRICAL PLANS.
 5. USE APPROPRIATE NOZZLES TO CONVEY WATER TO LANDSCAPED AREAS.

NOTE:
 USE VAN Series NOZZLES WATERING ODD-SHAPED AREAS
 SEE SHEET No. 61 & 62, FOR IRRIGATION DETAILS AND NOTES

NOZZLE	RAJUS(T)	FLOW(GPM)	PRESSURE (in/h)
BH	8	0.52	1.58
BH	8	0.58	1.58
BH	10	0.70	1.52
BH	12	1.30	1.74
BH	15	1.85	1.58
BH	18	0.92	1.58
BH	190	4.30	
BH	190T	1.21	
BH	190ST	0.81	

RAIN BIRD NOZZLE SERIES MPR
 OPTIMUM PRESSURE 30 PSI.

LEGEND

- PVC CLASS 200 PLASTIC PIPE (LATERAL LINE)
- PVC SCHEDULE 40 PLASTIC PIPE (MAIN LINE)
- RAIN BIRD 1804 POP-UP SPRAY HEAD
- RAIN BIRD 1806 POP-UP SPRAY HEAD
- RAIN BIRD 1812 POP-UP SPRAY HEAD
- DOUBLE CHECK VALVE ASSEMBLY (DCA)
- WATER METER
- ELECTRIC REMOTE- CONTROL VALVE
- NUMBER OF STATIONS
- TOTAL GALLONS PER MINUTE
- SIZE OF VALVE

This record drawing is a completion of the seeded engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on this record drawing is the responsibility of the contractor. It is not to be used for any other project without the written consent of Birkhoff, Hendricks & Conway, L.L.P. of the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.W.B. DATE 05/04/2010

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 ADDISON ROAD IRRIGATION

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

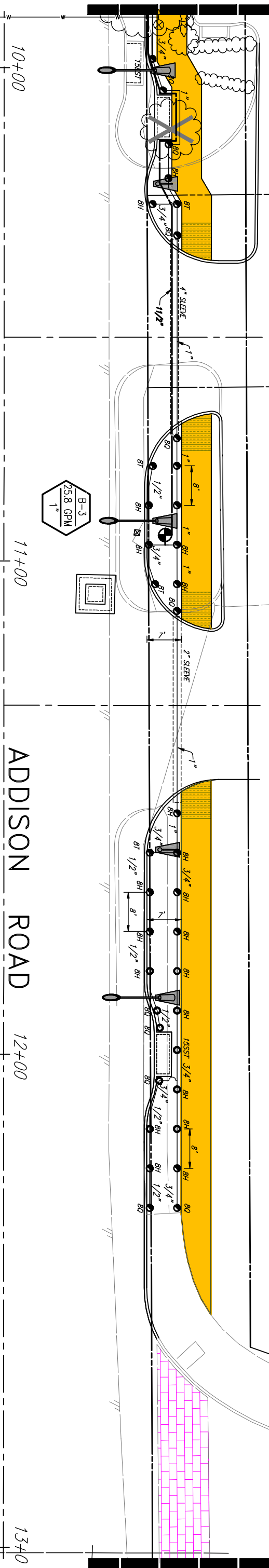
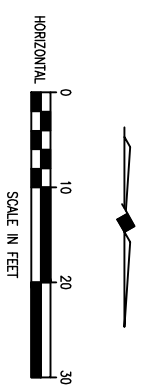


DESIGNED BY: G.C.
 DRAWN BY: B.H.A.C.
 PROJECT: 2002 102
 DATE: APRIL 2007
 SHEET NO. 59 OF 68 SHEETS



MATCH LINE C1-C1

EXISTING PLANT MATERIAL TO REMAIN
CONTRACTOR TO COORDINATE WITH
PROPERTY OWNER ON MAINTAINING
EXISTING LANDSCAPE IRRIGATION.

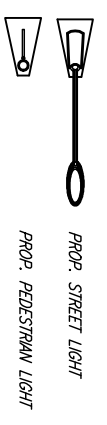


- NOTE:
1. PRIVATE OWNER SHALL BE RESPONSIBLE FOR RESTORING 100% COVERAGE AND AUTO-OPERATION. PRIVATE PROPERTY SPRINKLERS SHALL BE FIELD LOCATED, CAPPED FOR CONSTRUCTION, REPAIRED TO MAKE OPERATIONAL. ALSO NOTE CONTRACTOR SHALL RUN PRIVATE SYSTEMS IN THE PRESENCE OF OWNER TO VERIFY CONDITIONAL OF SYSTEM BEFORE CONSTRUCTION ACTIVITIES. EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER AND MAINTAINING EXISTING LANDSCAPE IRRIGATION.
 2. ALL NEW PROPOSED RETRO CONTROL VALVES TO BE LOCATED AWAY FROM STREET, CLOSE TO SIDEWALK WATER SERVICE VALVING AND CONTROLLER TO BE LOCATED IN THE FIELD BY THE TOWN OF ADDISON.
 3. LOCATION OF IRRIGATION WATER SERVICE VALVING AND CONTROLLER TO BE LOCATED IN THE FIELD BY THE TOWN OF ADDISON.
 4. IRRIGATION CONTRACTOR TO RUN ELECTRICAL CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL SERVICE PANEL AND SEPARATE CONTROLLER 20 AMP. CIRCUIT FOR EACH CONTROLLER IS SHOWN IN THE ELECTRICAL PLANS.
 5. USE APPROPRIATE NOZZLES TO CONFINE WATER TO LANDSCAPED AREAS.

MATCH LINE C-C

LEGEND

- PVC CLASS 200 PLASTIC PIPE (LATERAL LINE)
- PVC SCHEDULE 40 PLASTIC PIPE (MAIN LINE)
- RAIN BIRD 1804 POP-UP SPRAY HEAD
- RAIN BIRD 1806 POP-UP SPRAY HEAD
- RAIN BIRD 1812 POP-UP SPRAY HEAD
- CONTROLLER
- DOUBLE CHECK VALVE ASSEMBLY (DCA)
- ⊗ WATER METER
- ⊗ ELECTRIC RETRO- CONTROL VALVE
- ⊗ NUMBER OF STATIONS
- ⊗ TOTAL GALLONS PER MINUTE
- ⊗ SIZE OF VALVE



MINOL CENTRE
15280 ADDISON RD.

RAIN BIRD NOZZLE SERIES MPR

NOZZLE	RADIUS(FT)	FLOW(GPM)	PRECIP.(IN/HR)
BH	8	0.52	1.58
B1	8	0.35	1.58
B0	8	0.26	1.58
10H	10	0.79	1.52
12H	12	1.30	1.74
15H	15	1.56	1.58
150	15	0.92	1.58
155ST	4X30	1.21	1.58
155ST	4X15	0.61	1.58

NOTE:
USE VAN Series NOZZLES WATERING ODD-SHAPED AREAS.
SEE SHEET No. 61 & 62, FOR IRRIGATION DETAILS AND NOTES

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

ARAPAHO ROAD

MATCH LINE D1-D1

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer, cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
J.W.B.
DATE: 10/31/06



TOWN OF ADDISON, TEXAS

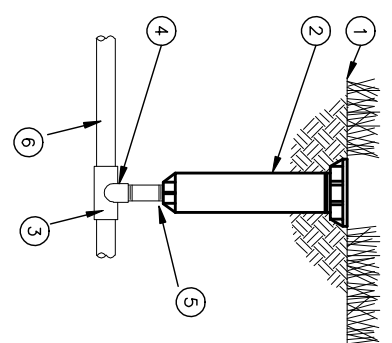
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD IRRIGATION

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: G.C.
PROJECT: 2002_102
DRAWN BY: B.H.&C.
DATE: APRIL 2007

SHEET NO. 60
OF 68 SHEETS

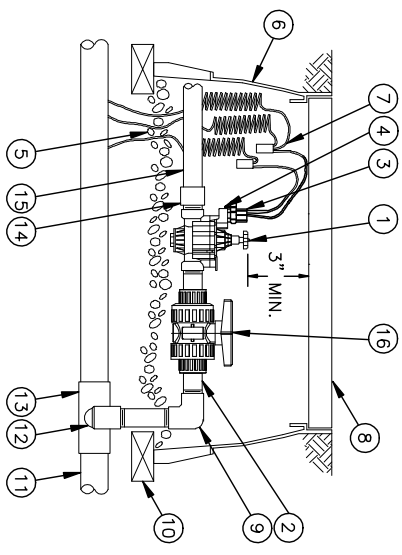
RAIN BIRD 1800 SERIES



- 1 FINISH GRADE/TOP 1/2" ABOVE TOP OF MULCH
- 2 POP-UP SPRAY SPRINKLER: RAIN BIRD 1800
- 3 PVC SCH 40 FITTING
- 4 PVC SCH 40 ELL
- 5 6" GREEN NIPPLES CUT TO FIT.
- 6 PVC LATERAL PIPE

INSTALLATION DETAIL
NO SCALE

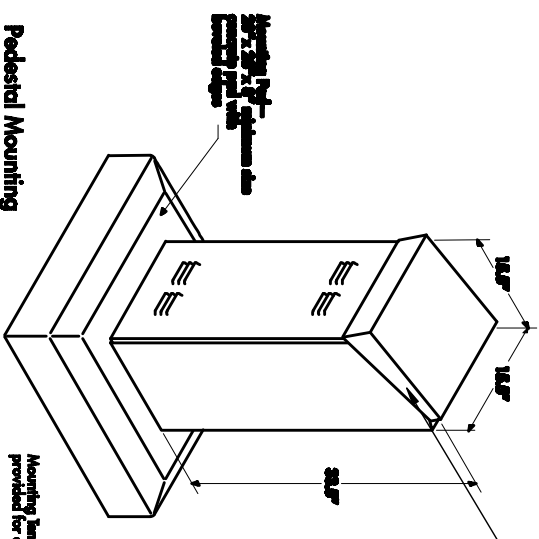
REMOTE CONTROL VALVE WEATHERMATIC 11000CR SERIES



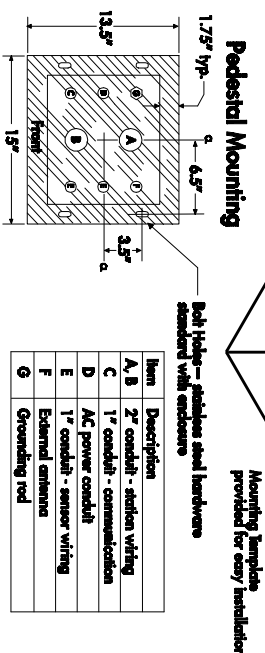
- 1 Weathermatic 11000 FCR SERIES REMOTE CONTROL VALVE
- 2 INSTALL THREADED MALE ADAPTER WITH TELFON TAPE/TYP.
- 3 SOLENOID
- 4 MANUAL BLEED LEVER
- 5 4.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 6 AMETEK RECTANGULAR PLASTIC BOX
- 7 EXPANSION COIL & WATERPROOF CONNECTOR
- 8 FINISH GRADE/TOP 1/2" ABOVE TOP OF MULCH
- 9 PVC SCH. 40 ELBOW
- 10 BRICK (1 OF 4)
- 11 SCH. 40 MAINLINE PIPE
- 12 PVC SCH. 40 ELL
- 13 PVC SCH. 40 TEE OR ELL
- 14 PVC SCH. 40 MALE ADAPTER
- 15 PVC LATERAL PIPE
- 16 PVC BALL VALVE

INSTALLATION DETAIL
NO SCALE

EVOLUTION DX2 STAINLESS STEEL PEDESTAL CABINET INSTALLATION



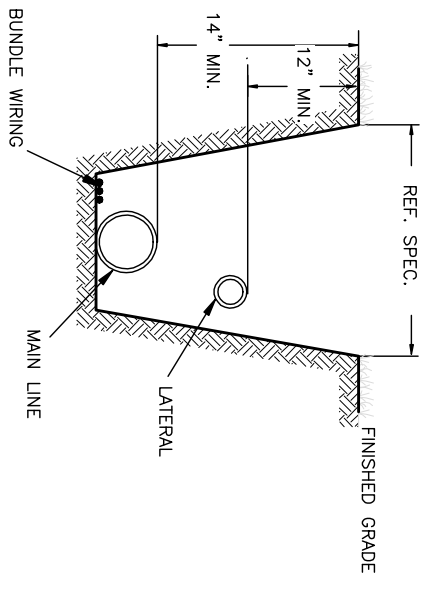
RAIN MASTER EVOLUTION DX-2 CONTROLLER—ELECTRICAL POWER DISTRIBUTION AND PHONE SERVICE LINES TO THE IRRIGATION CONTROLLERS SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR. THE ELECTRICAL AND PHONE LINES (AND ALL RELATED WORK) SHALL BE INSTALLED PER ALL LOCAL, STATE AND NATIONAL CODES.



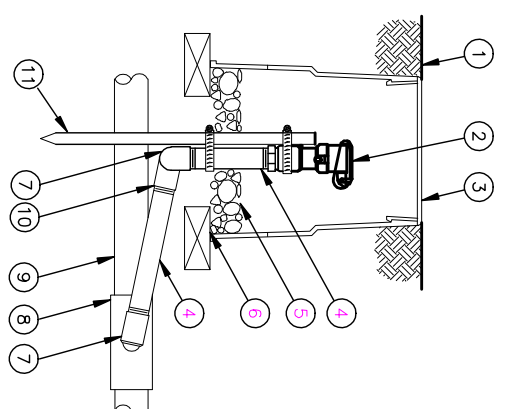
Item	Description
A, B	2" conduit - station wiring
C	1" conduit - communication
D	AC power conduit
E	1" conduit - sensor wiring
F	External antenna
G	Grounding rod

INSTALLATION DETAIL
NO SCALE

TRENCHING DETAIL
NO SCALE



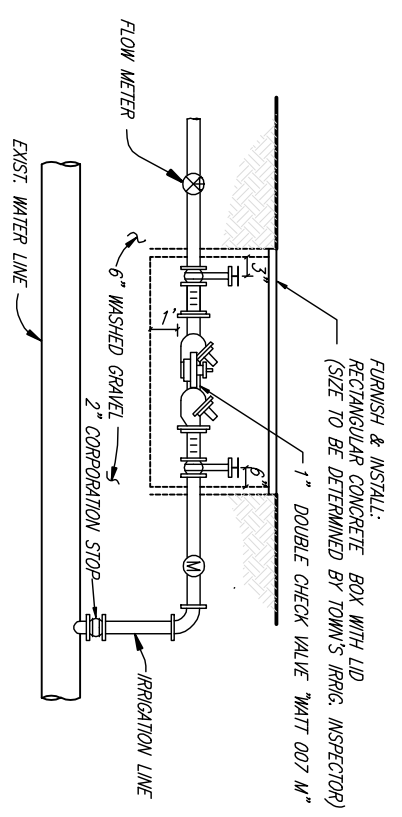
QUICK COUPLER VALVE BUCKNER V075



- 1 FINISH GRADE/TOP 1/2" ABOVE TOP OF MULCH
- 2 QUICK-COUPLING VALVE: BUCKNER V075
- 3 10" ROUND PLASTIC AMETEK VALVE BOX.
- 4 PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- 5 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 6 BRICK (1 OF 2)
- 7 PVC SCH 40 STREET ELL
- 8 PVC SCH 40 TEE OR ELL
- 9 PVC MAINLINE PIPE
- 10 PVC SCH 40 ELL
- 11 1/2" Dia. X .18" STEEL REBAR WITH STAINLESS STEEL WORN SCREW CLAMP.

INSTALLATION DETAIL
NO SCALE

DOUBLE CHECK VALVE ASSEMBLY



INSTALLATION DETAIL
NO SCALE

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD IRRIGATION NOTES & DETAILS
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas



DESIGNED BY: G.C.	PROJECT: 2002 102	SHEET NO. 61
DRAWN BY: B.H. & C.	DATE: APRIL 2007	OF SHEETS

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing one on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY: J.W.B. DATE: 08/04/2010

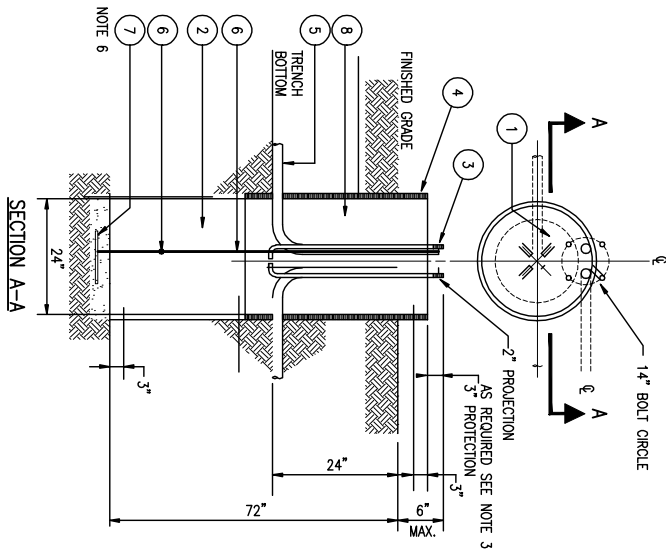
DATE: 10/31/06

MODIFICATIONS TO ELECTRICAL SHEETS

Contractor shall implement these modifications to the Electrical Sheets and include such cost in the appropriate bid items.

- A. Sheet No. 63 (Drawing E-1): Roadway Lighting - Part "A"
 1. Add an additional Utility Service/Detail 2/E-5 for a total of two (2) Utility Services. One service will serve Roadway Lighting exclusively and the other service will serve Pedestrian and Irrigation Systems.
 2. Currently a single feeder containing 2 #10, #10G, 3/4" C, is shown from the single service to each pullbox/light fixture. Provide an additional feeder of 2 #10, #10G, 2" C, to also loop through each pull box. One circuit will serve Roadway Lighting exclusively while the other feeder will serve Pedestrian and Irrigation Systems.
 3. Change the conduit size to 2-inch.
- B. Sheet No. 64 (Drawing E-2): Roadway Lighting - Part "B"
 1. Currently a single feeder containing 2 #10, #10G, 3/4" C, is shown from the single service to each pullbox/light fixture. Provide an additional feeder of 2 #10, #10G, 2" C, to also loop through each pull box. One circuit will serve Roadway Lighting exclusively while the other feeder will serve Pedestrian and Irrigation Systems.
 2. Change the conduit size to 2-inch.
- C. Sheet No. 65 (Drawing E-3): Roadway Lighting - Part "C"
 1. Currently a single feeder containing 2 #10, #10G, 3/4" C, is shown from the single service to each pullbox/light fixture. Provide an additional feeder of 2 #10, #10G, 2" C, to also loop through each pull box. One circuit will serve Roadway Lighting exclusively while the other feeder will serve Pedestrian and Irrigation Systems.
 2. Change the conduit size to 2-inch.
- D. Sheet No. 66 (Drawing E-4): Roadway Lighting - Part "D"
 1. Add an additional Utility Service/Detail 2/E-5 for a total of two (2) Utility Services. One service will serve Roadway Lighting exclusively and the other service will serve Pedestrian and Irrigation Systems.
 2. Currently a single feeder containing 2 #10, #10G, 3/4" C, is shown from the single service to each pullbox/light fixture. Provide an additional feeder of 2 #10, #10G, 2" C, to also loop through each pull box. One circuit will serve Roadway Lighting exclusively while the other feeder will serve Pedestrian and Irrigation Systems.
 3. Change the conduit size to 2-inch.

- E. Sheet No. 66 (Drawing E-5): Details.
 1. Modify detail 3/E-5 height currently indicated for the pole as 38'-0" to 17'-0".
 2. Detail (3/E-5) Fixture SAA add the following:
"For combination roadway/pedestrian type SA fixture, the light fixture and obstruction light will both be served from the pedestrian lighting circuit and be controlled by the obstruction light photo cell."
- F. Sheet No. 67 (Drawing E-6):
 1. The roadway light fixture SA will be served from the roadway lighting circuit and be controlled by the photo cell mounted on top of the roadway fixture.
 2. Add the description "photo cell" to the leader line on the detail for fixture SB to control the fixture.
- G. Sheet No. 68 (Drawing E-7): Schedules
 1. Modify Light Fixture Schedule note 4. Note should read "Similar to "SA" except 17-foot maximum height pole".
 2. Add the following:
"The poles shall be steel and the color of the top coats shall be selected by the Town of Addison. The manufacturer of the fixtures is Lumtec-Schneider of Canada, local representative, 214-658-9000."
- H. Locations of light standards shown on Electrical Sheets are shown schematically. Place light standards to locations as shown on coordinate layout plans, make field adjustment as required and approved by the Town.



ITEM	DESCRIPTION
1	#3 REBAR, 18 IN. DIA. HOOP, 3 IN. OVERLAP
2	#5 REBAR, STRAIGHT, 60 IN. LONG, 3" COVER
3	ANCHOR BOLT, GALV, 1" W/25" & 30" POLES & 1/4" W/40" POLES
4	CONCRETE FOUNDATION TUBE, 24 IN. DIA.
5	CONDUIT, PVC OR PEC (NOT IN FOUNDATION ANN)
6	WIRE, #5 COPPER, SOLID (SEE NOTE 6)
7	GROUND, POLE BOLT WIRE COIL (SEE NOTE 6)
8	CONCRETE (SEE NOTE 1)

STREET LIGHT BASE

- NOTE:
1. CONCRETE TO BE MIN. 3000 PSI AT 28 DAYS, (5 SACK) MAX. TOP OF FOUNDATION TO BE TROWELED TO A FLAT AND LEVEL SURFACE. AVOID EXCESSIVE TROWELING. CONCRETE TO SET A MIN. OF 7 DAYS BEFORE POLE INSTALLATION.
 2. REBAR HOOPS ARE TIED BEGINNING 3' BELOW TOP OF CONCRETE FORM AND ARE REPEATED AT APPROXIMATE 1' INTERVALS TO BOTTOM OF FOUNDATION.
 3. 1" ANCHOR BOLTS TO BE USED WITH 25' & 30' SQUARE AND ROUND POLES.
 4. CONCRETE FORM, OF SONOTUBE TO EXTEND TO BOTTOM OF TRENCH OR AS NEEDED.
 5. PROVIDE MIN. 24" GROUND WIRE PIGTAIL OUT OF CONCRETE FOR CONNECTION TO POLE.
 6. A MIN. OF 12" OF BARE #5 SD CU WIRE TO BE PLACED IN BOTTOM OF HOLE AND COVERED WITH 2" OF DIRT.
 7. IF SOIL HAS BEEN DISTURBED, EXTEND FOUNDATION BY DEPTH OF DISTURBED SOIL.
 8. NOT APPLICABLE FOR POLE HEIGHT GREATER THAN 40'.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy, or the completeness of their standards & practices. The design engineer's office is Birkhoff, Hendricks & Conway, L.L.P. BY J.W.B. DATE 05/04/2010

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

J.W.B.

DATE: 10/3/10

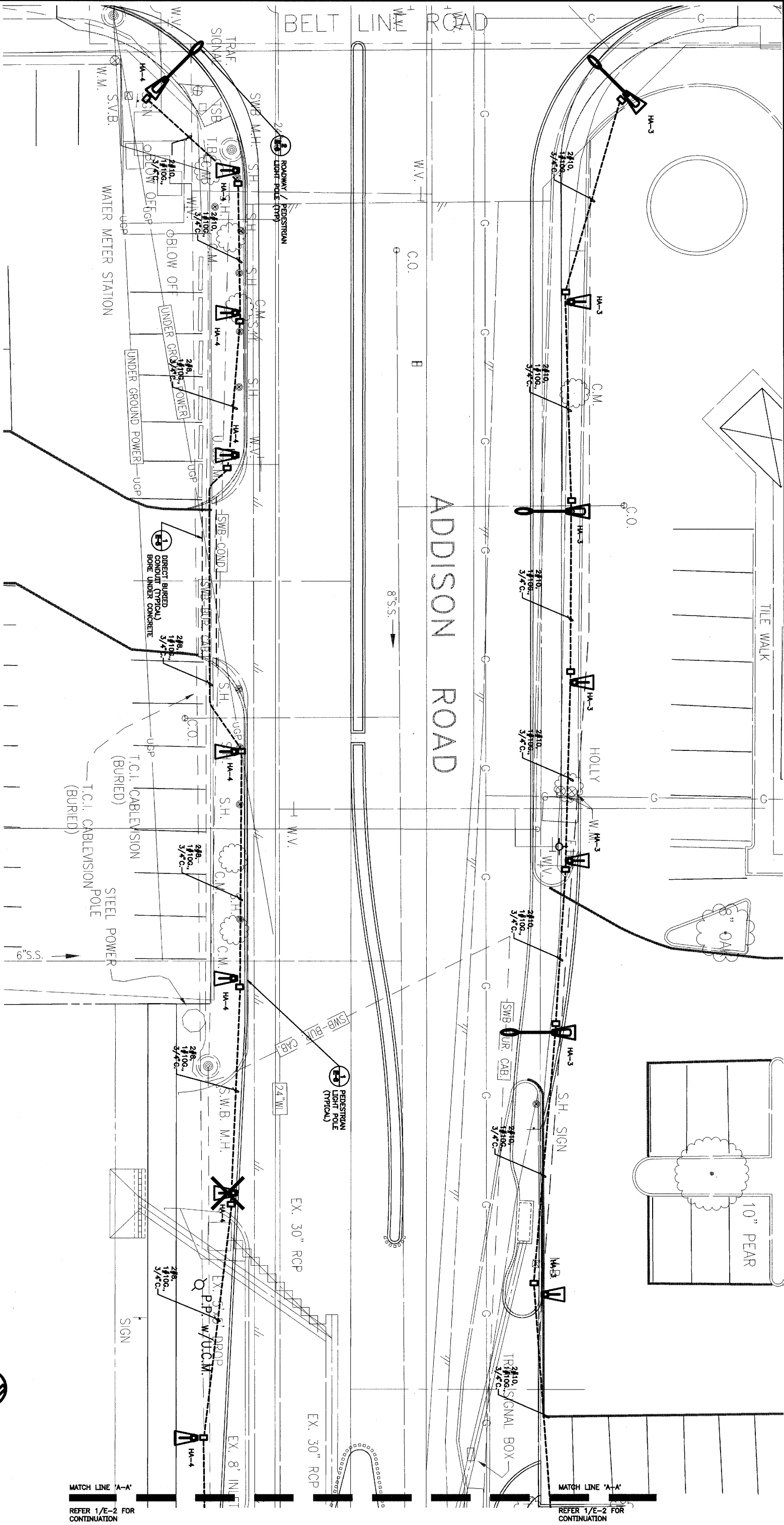
These plans and related specifications were prepared for the specific project only. Reuse of these documents is not permitted without the written approval of Birkhoff, Hendricks & Conway, L.L.P.

TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ELECTRICAL MODIFICATION NOTES

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: <u>G.C.</u>	PROJECT: <u>2002_102</u>	SHEET NO. <u>E-0</u>
DRAWN BY: <u>B.H. & C.</u>	DATE: <u>SEPTEMBER 2006</u>	OF <u>68</u> SHEETS



1 ROADWAY LIGHTING - PART 'A'
SCALE: 1" = 10'-0"

- SA TYPICAL
- SB TYPICAL
- HA-XX DENOTES CIRCUIT NUMBER
- PULLBOX. REFER TO DRAWING 5-2, DETAIL 2

This record drawing is a compilation of the sealed engineering drawings for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, LLP.
BY J.W.B. DATE 05/04/2010

REVISION
ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007



Handwritten signature and initials

GRAPHIC SCALE
1" = 10'-0"
0 5' 10' 20' 30' 40'



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD LANDSCAPE/LIGHTING





DESIGNED BY: JAM
DRAWN BY: AAE
DATE: OCTOBER 24, 2007
PROJECT: 2008 100
SHEET NO. E-1 (23)
SHEETS

CONSULTING ENGINEERS
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
Dallas, Texas

MATCH LINE 'A-A'
REFER 1/E-2 FOR CONTINUATION

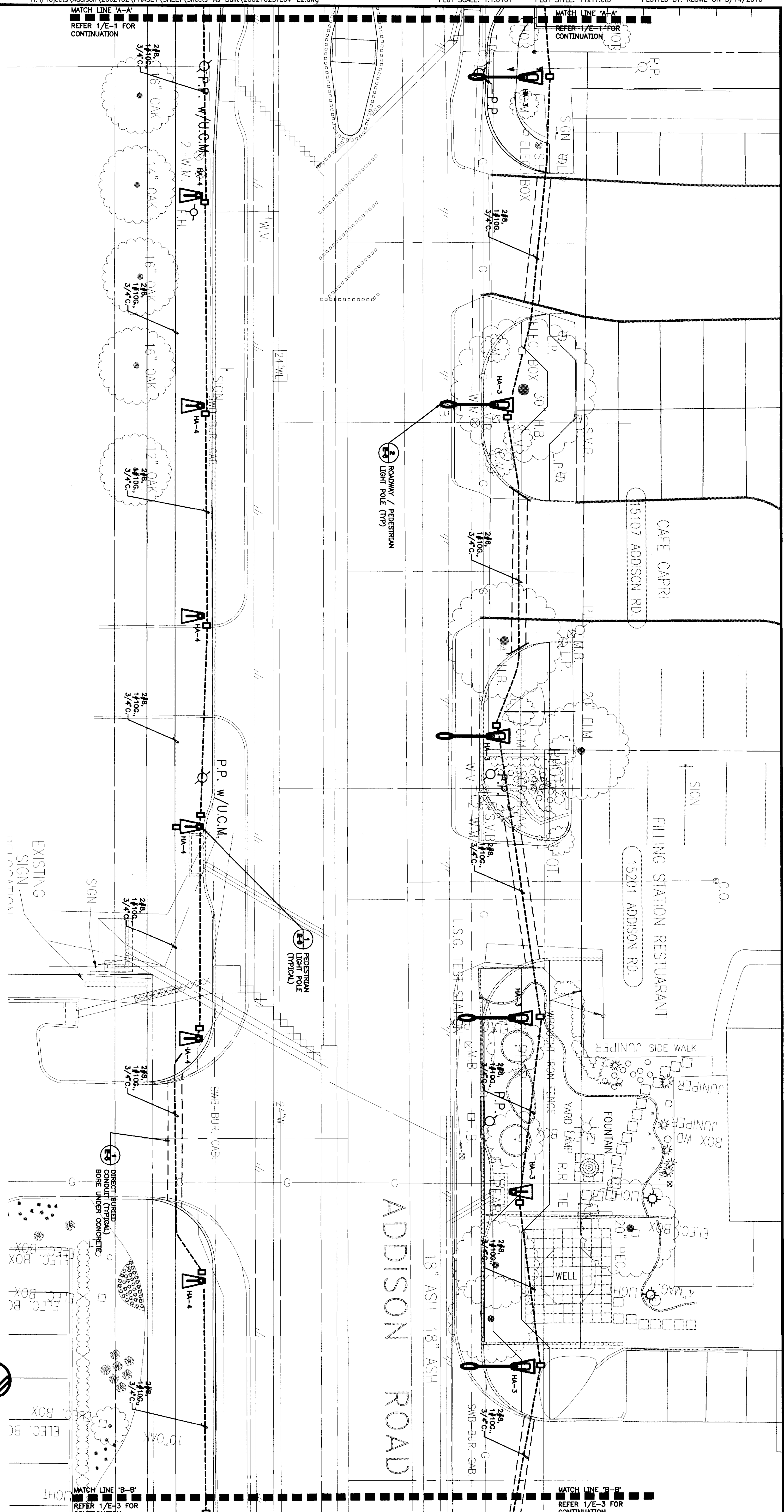
MATCH LINE 'A-A'
REFER 1/E-2 FOR CONTINUATION

MATCH LINE 'A-A' REFER 1/E-3 FOR CONTINUATION

-  SA: TYPICAL
-  SB: TYPICAL
-  HA-XX DENOTES CIRCUIT NUMBER
-  PULLBOX. REFER TO DRAWING 5-2, DETAIL 2

1 ROADWAY LIGHTING - PART B-C

SCALE: 1"=10'-0"



MATCH LINE 'B-B' REFER 1/E-3 FOR CONTINUATION

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, engineering change orders, and field notes. The information shown on this drawing is the latest information provided by the contractor or others not associated with the design engineer, cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, LLP.
 BY J.W.B. DATE 05/04/2010

REVISION
ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007



TOWN OF ADDISON, TEXAS

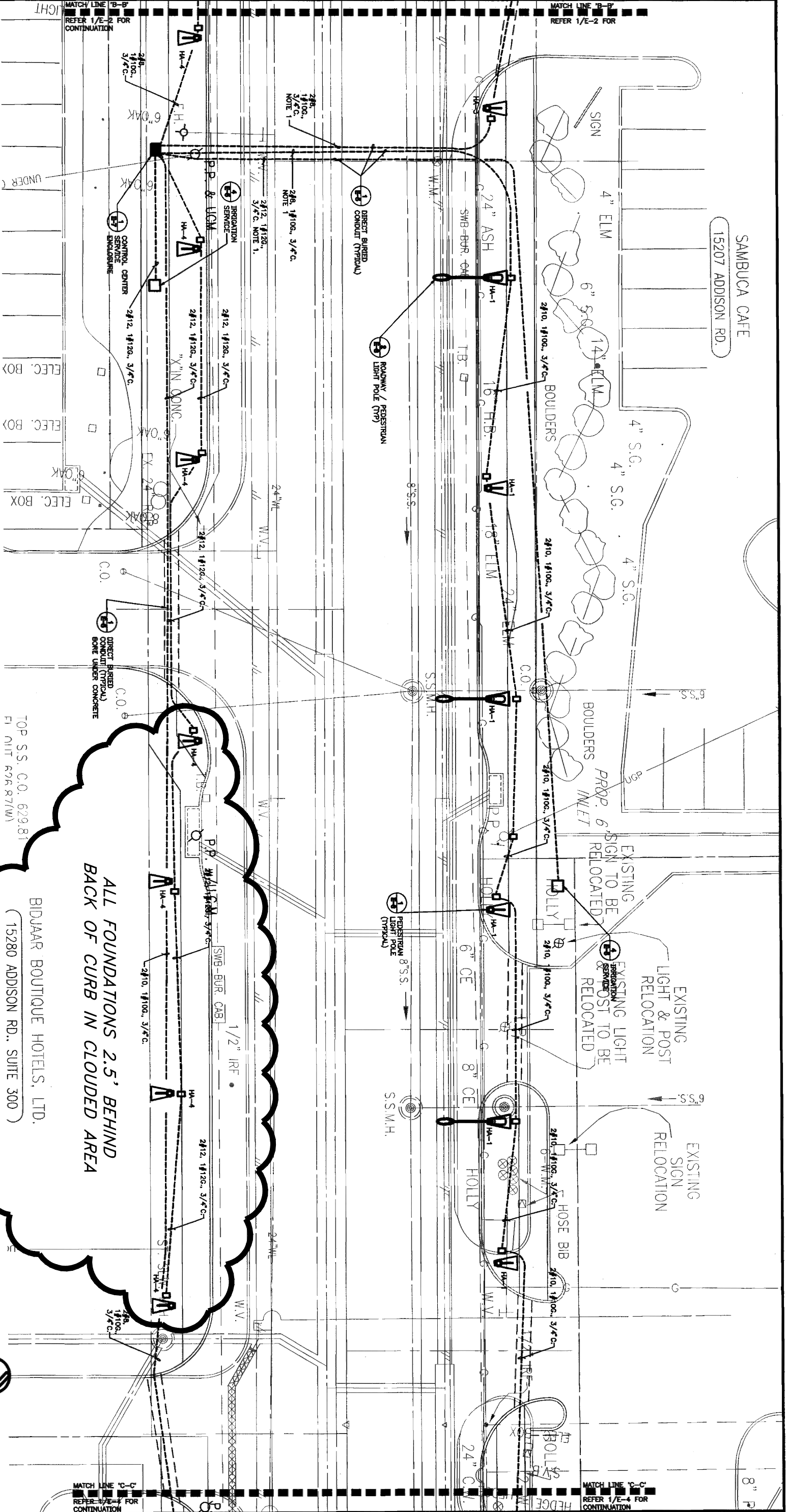
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO APARAH ROAD PHASE I
ADDISON ROAD LANDSCAPE/LIGHTING

DESIGNED BY: J.W.B.

PROJECT: ADDISON ROAD IMPROVEMENTS
 DATE: OCTOBER 24, 2007

SHEET NO. E-2 (4)
 OF 4 SHEETS

Drawn by



NOTE
 1. COORDINATE CROSSING WITH TXU. TXU WILL PROVIDE TRENCH.

1 ROADWAY LIGHTING - PART B-C
 SCALE: 1" = 10'-0"



'SA' TYPICAL

'SB' TYPICAL

HA-XX DENOTES CIRCUIT NUMBER

PULLBOX. REFER TO DRAWING 5-2, DETAIL 2

ALL FOUNDATIONS 2.5' BEHIND
 BACK OF CURB IN CLOUDED AREA

BIDJAAR BOUTIQUE HOTELS, LTD.
 (15280 ADDISON RD., SUITE 300)



TOWN OF ADDISON, TEXAS

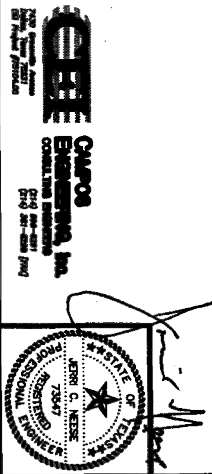
ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAHAO ROAD PHASE I
 ADDISON ROAD LANDSCAPE/LIGHTING

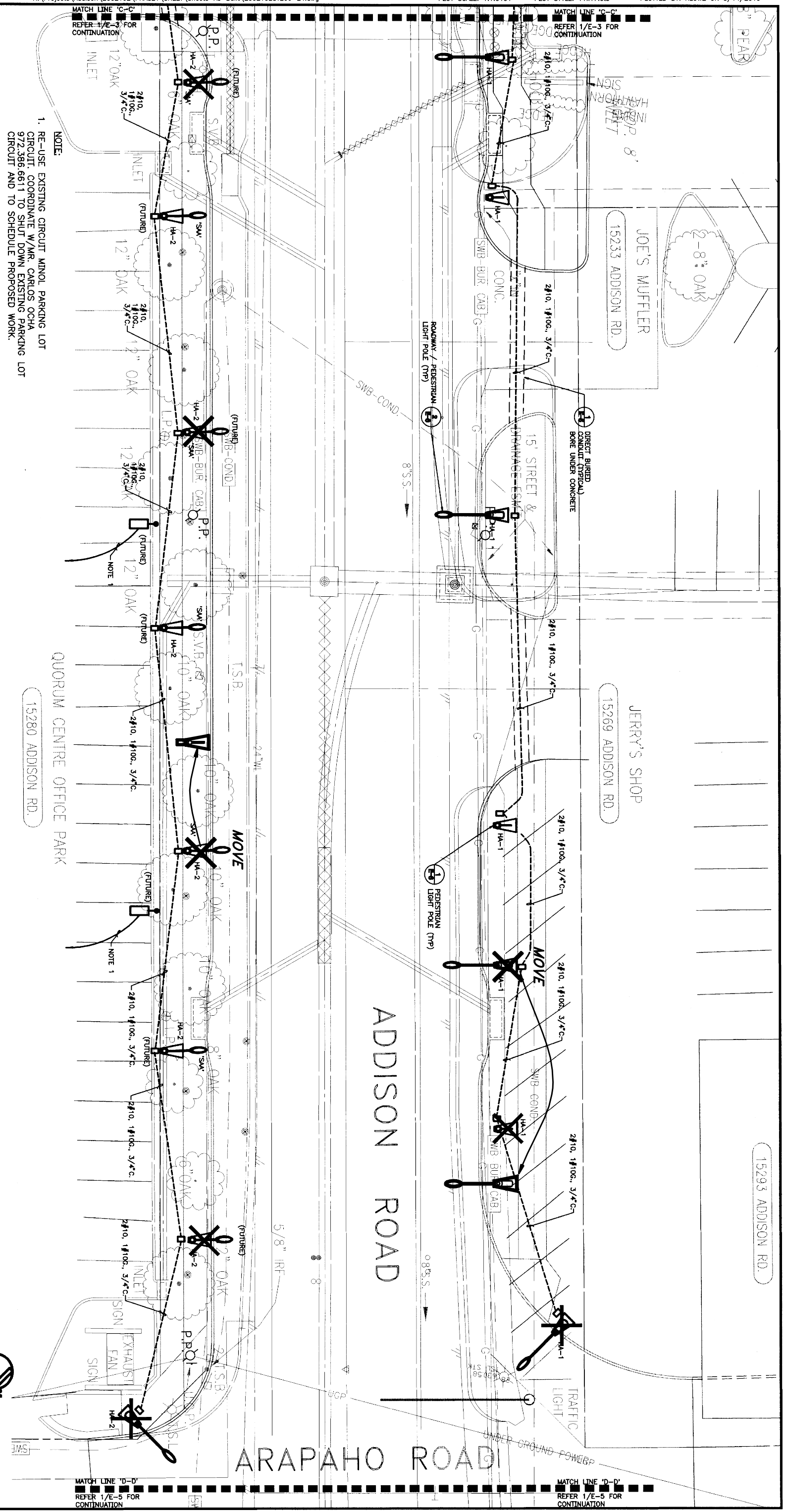
BIRRHIOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS

DESIGNED BY: JAC	DATE: 05/04/2010	SHEET NO.: E-3 (55)
DRAWN BY: JAC	PROJECT: ADDISON ROAD IMPROVEMENTS	OF: 55
DATE: 05/04/2010	PROJECT: ADDISON ROAD IMPROVEMENTS	OF: 55

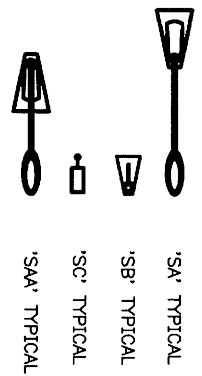
This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birrhioff, Hendricks & Conway, L.L.P.
 BY: J.W.B. DATE: 05/04/2010

REVISION
 ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007





NOTE:
 1. RE-USE EXISTING CIRCUIT MINOL PARKING LOT
 CIRCUIT. COORDINATE W/MR. CARLOS OCHA
 972.386.6611 TO SHUT DOWN EXISTING PARKING LOT
 CIRCUIT AND TO SCHEDULE PROPOSED WORK.



1 ROADWAY LIGHTING - PART 'C-D'
 SCALE: 1" = 10'-0"

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY: J.W.B. DATE: 05/04/2010

REVISION
 ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007

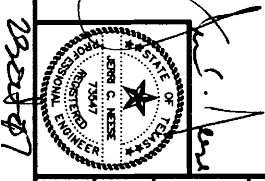


TOWN OF ADDISON, TEXAS

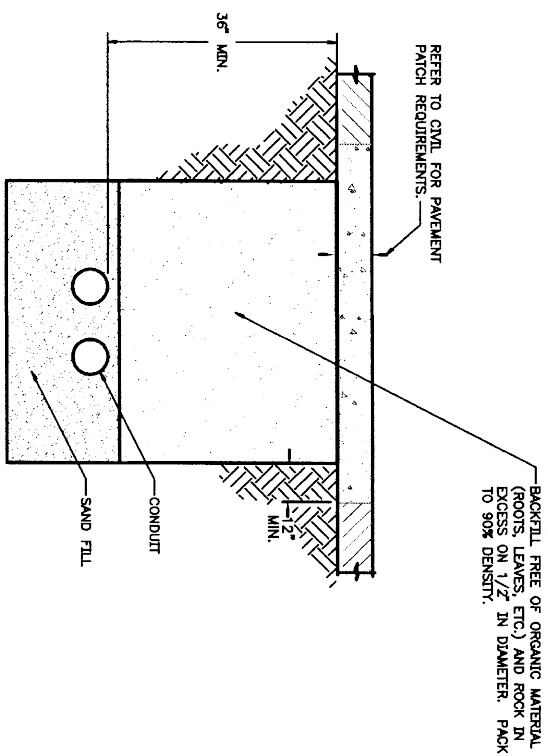
**ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 ADDISON ROAD LANDSCAPE/LIGHTING**

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

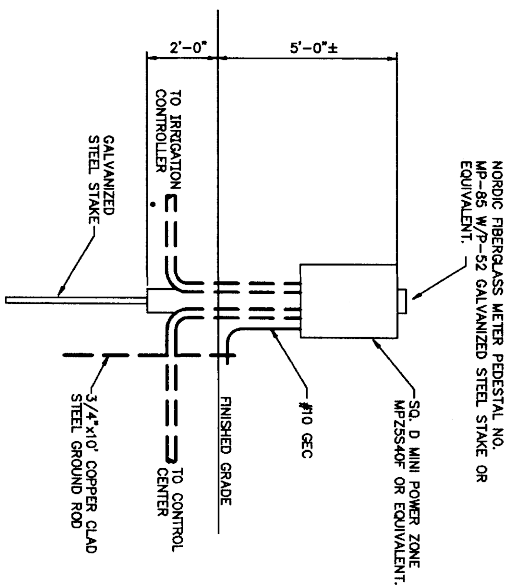
DESIGNED BY: JWC
 DRAWN BY: JWC
 PROJECT: 2007-104
 DATE: OCTOBER 24, 2007
 SHEET NO. E-4 (9)
 OF 9 SHEETS



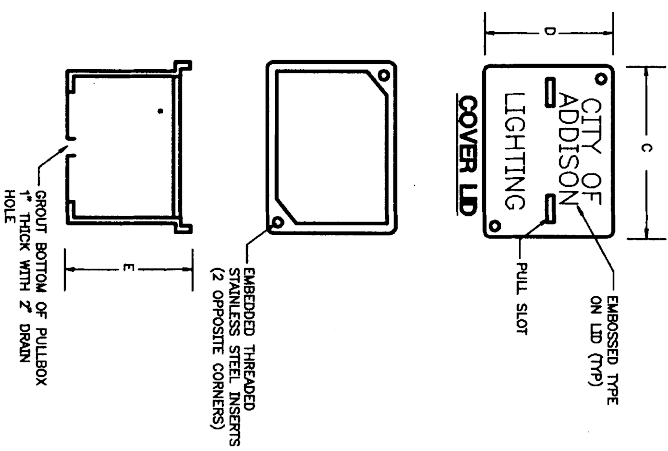
MATCH LINE 'C-C' REFER 1/E-3 FOR CONTINUATION
 MATCH LINE 'D-D' REFER 1/E-5 FOR CONTINUATION



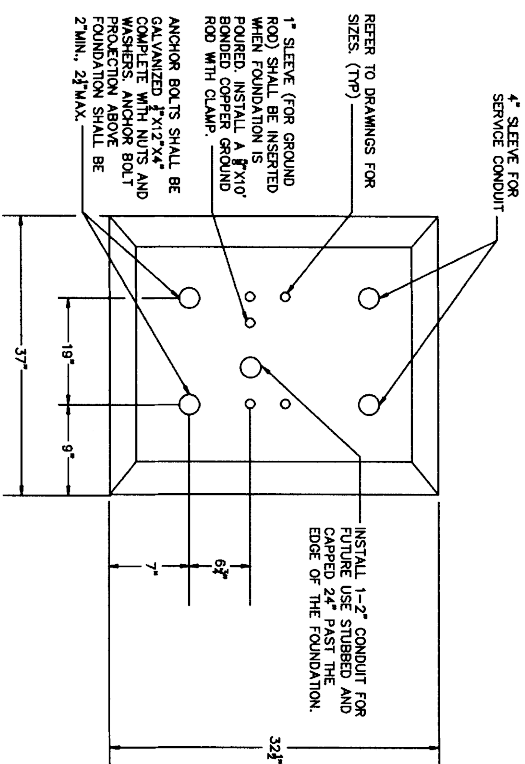
1 DIRECT BURIED CONDUIT
 SCALE: NONE



4 IRRIGATION SERVICE
 SCALE: NONE



2 PULLBOX DETAIL
 SCALE: NONE

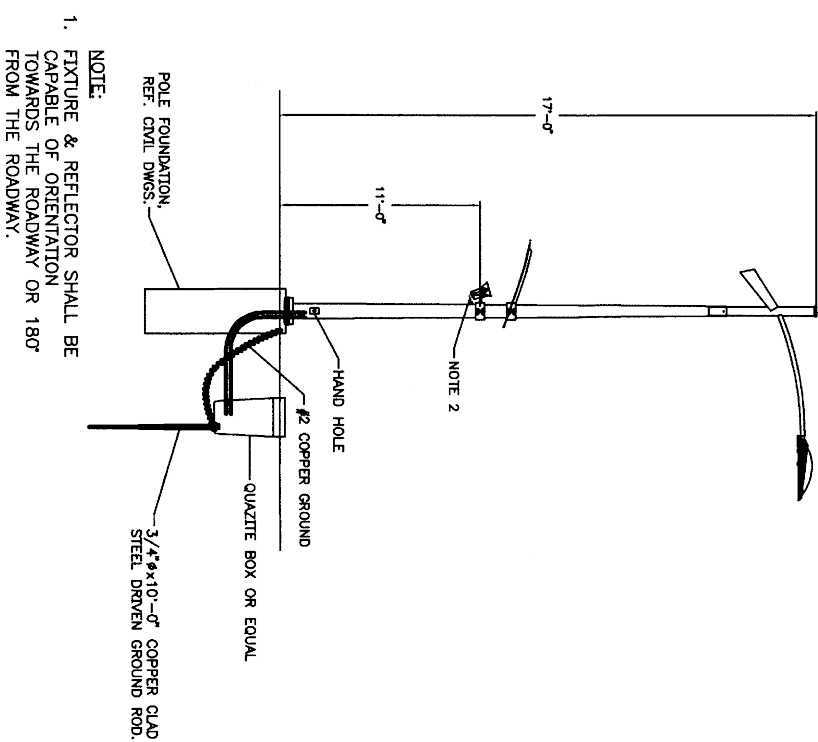


5 CONTROL CENTER FOUNDATION DETAIL
 SCALE: NONE

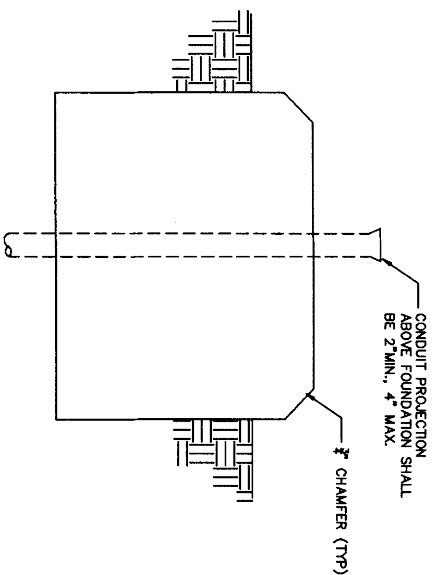
COVERS			
PULLBOX TYPE	DIMENSIONS (INCHES)		
	A	B	Z
A	23 3/4"	13 3/4"	2"

BOXES			
PULLBOX TYPE	DIMENSIONS (INCHES)		
	C	D	E
A	23 3/4"	13 3/4"	18"

- NOTES:**
- SEE STANDARD SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION.
 - COVER LETTING SHALL BE 1" LETTERS CAST-IN PLACE WITH THE LID. THE COVERS OR LIDS SHALL BE MARKED CITY OF ADDISON LIGHTING WITH CLEAN, EVEN STROKE LETTERING.
 - ALL DIMENSIONS ARE NOMINAL.



3 ROADWAY/PEDESTRIAN FIXTURE 'SAA'
 SCALE: NONE



REVISION
 ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007

CEI CONSULTING ENGINEERS
 CONSULTING ENGINEERS
 614 311-2000 (PH)
 614 311-2001 (FAX)



This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY J.W.B. DATE 05/04/2010

GRAPHIC SCALE
 1"=10'-0"



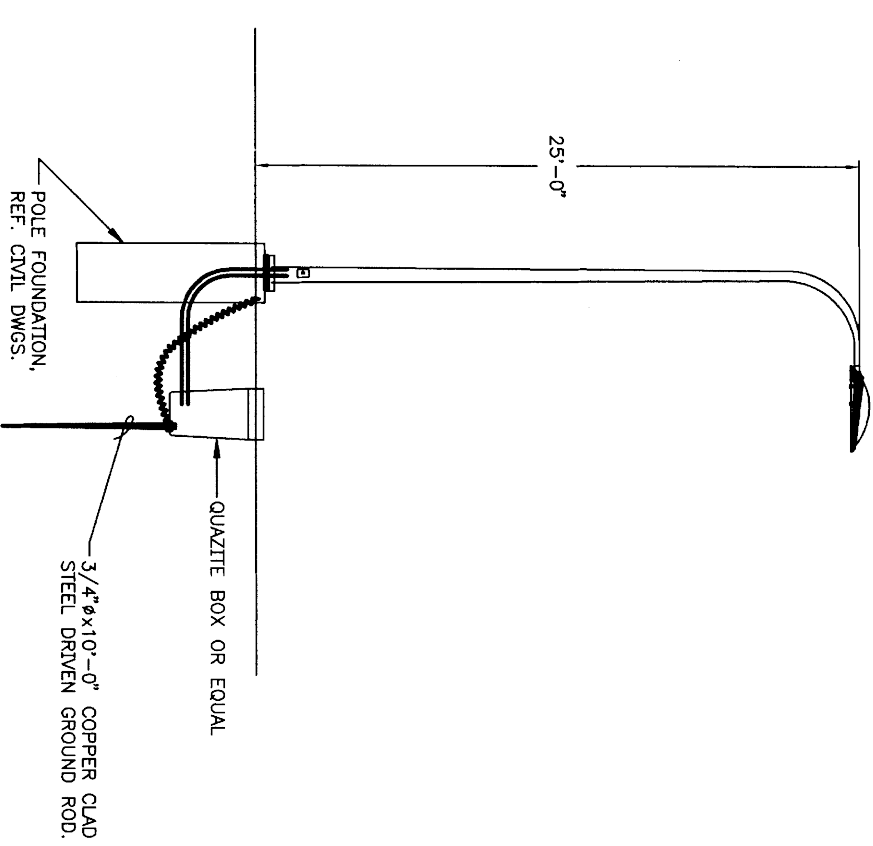
TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO APAPHO ROAD PHASE I
ADDISON ROAD LANDSCAPE/LIGHTING

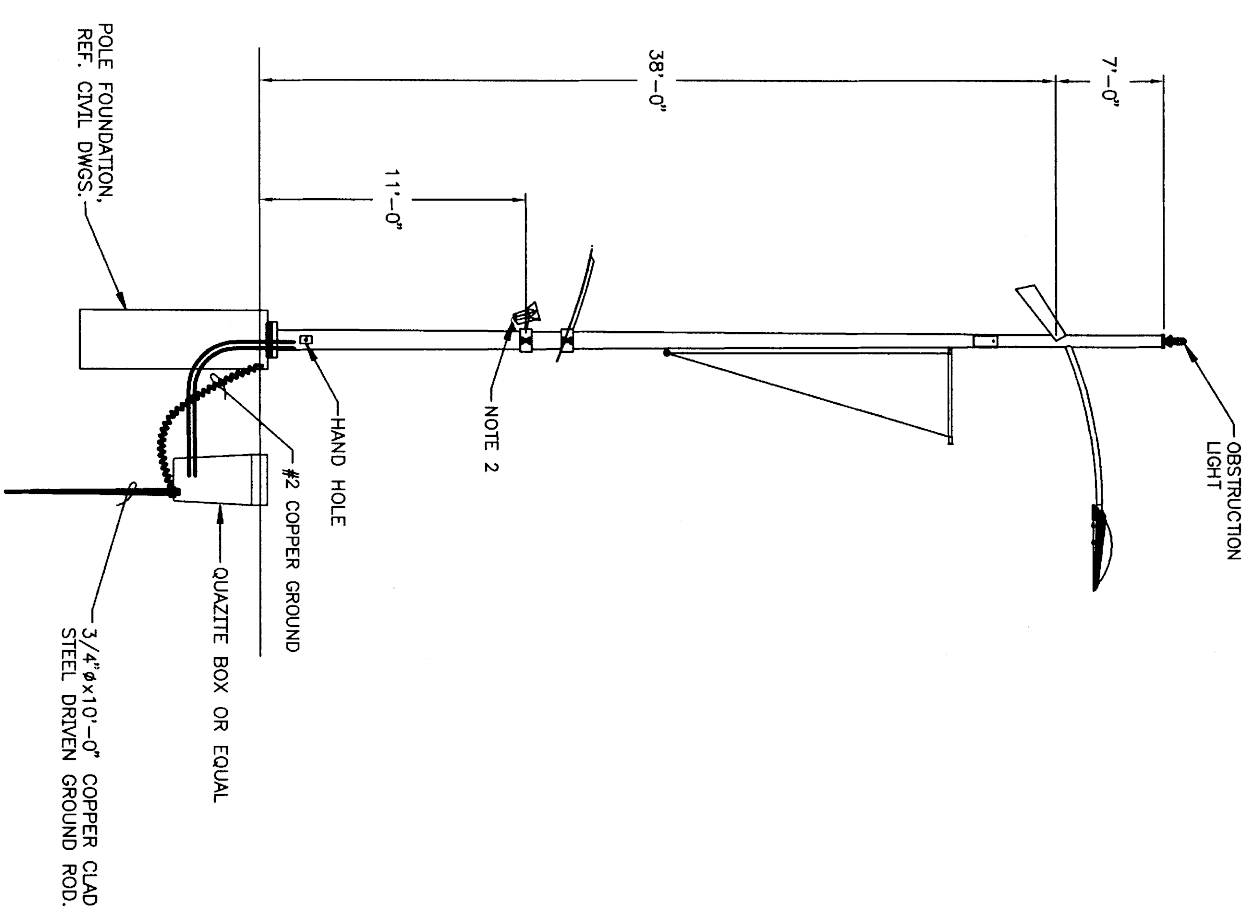
BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: JAC
 PROJECT: 2002102
 DRAWN BY: JAC DATE: OCTOBER 24, 2007 SHEET NO. E-5 (66)
 OF 66 SHEETS

22-2287



1
PARKING LOT FIXTURE 'SC'
 SCALE: NONE



2
ROADWAY/PEDESTRIAN FIXTURE 'SA'
 SCALE: NONE



1
PEDESTRIAN FIXTURE 'SB'
 SCALE: NONE

NOTES: 1. FIXTURE & REFLECTOR SHALL BE CAPABLE OF ORIENTATION TOWARDS THE ROADWAY OR 180° FROM THE ROADWAY.

NOTES: 1. PROVIDE 277V/1Ø PRIMARY/120V SECONDARY, XFMR 1KVA TO SERVE OBSTRUCTION LIGHT.
 2. FIXTURE & REFLECTOR SHALL BE CAPABLE OF ORIENTATION TOWARDS THE ROADWAY OR 180° FROM THE ROADWAY.

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, LLP.
 By J.M.B. DATE 05/04/2010

REVISION
 ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007

GRAPHIC SCALE:
 1" = 10'-0"



TOWN OF ADDISON, TEXAS

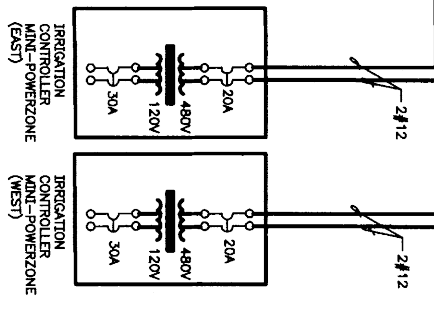
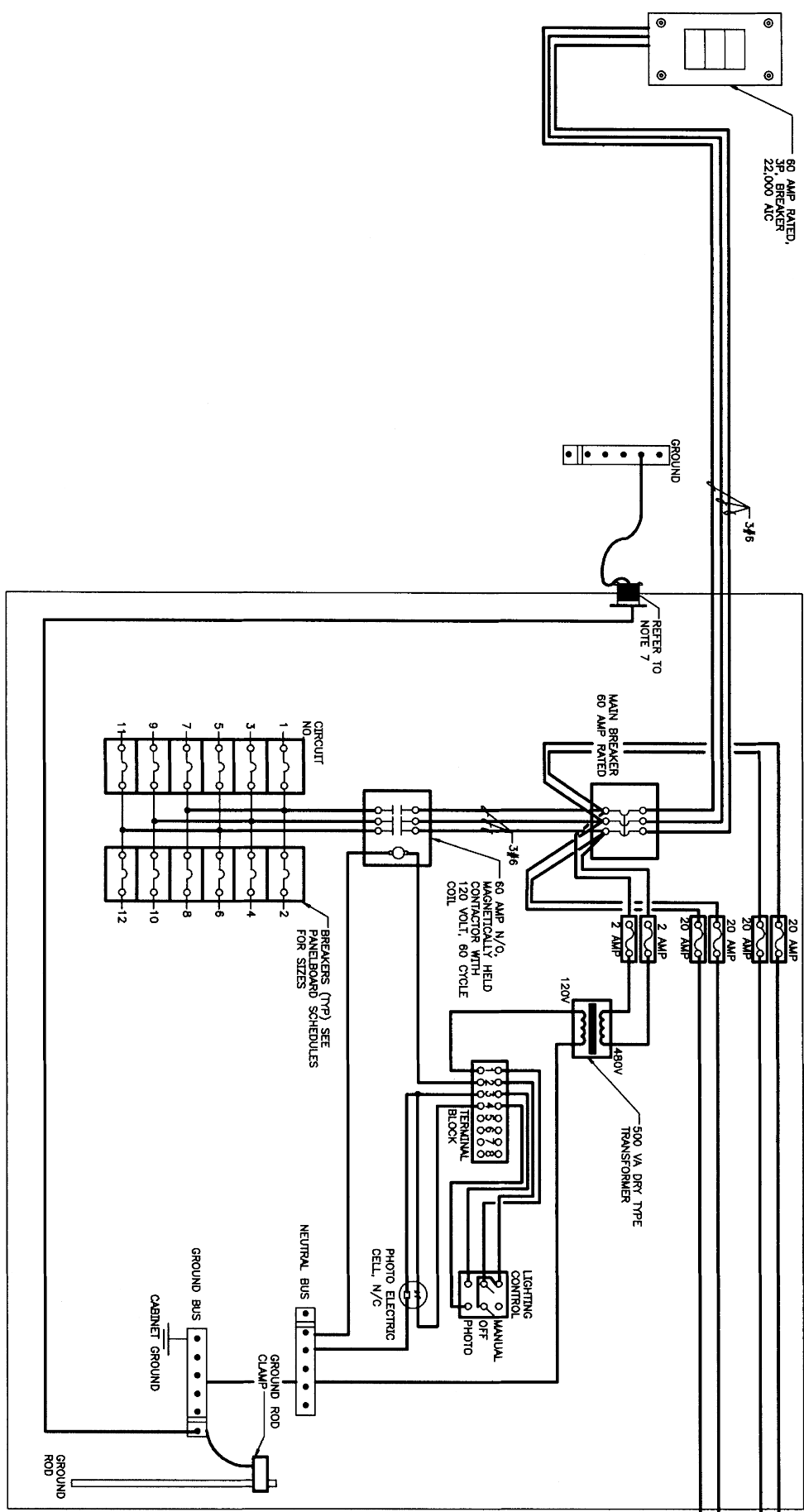
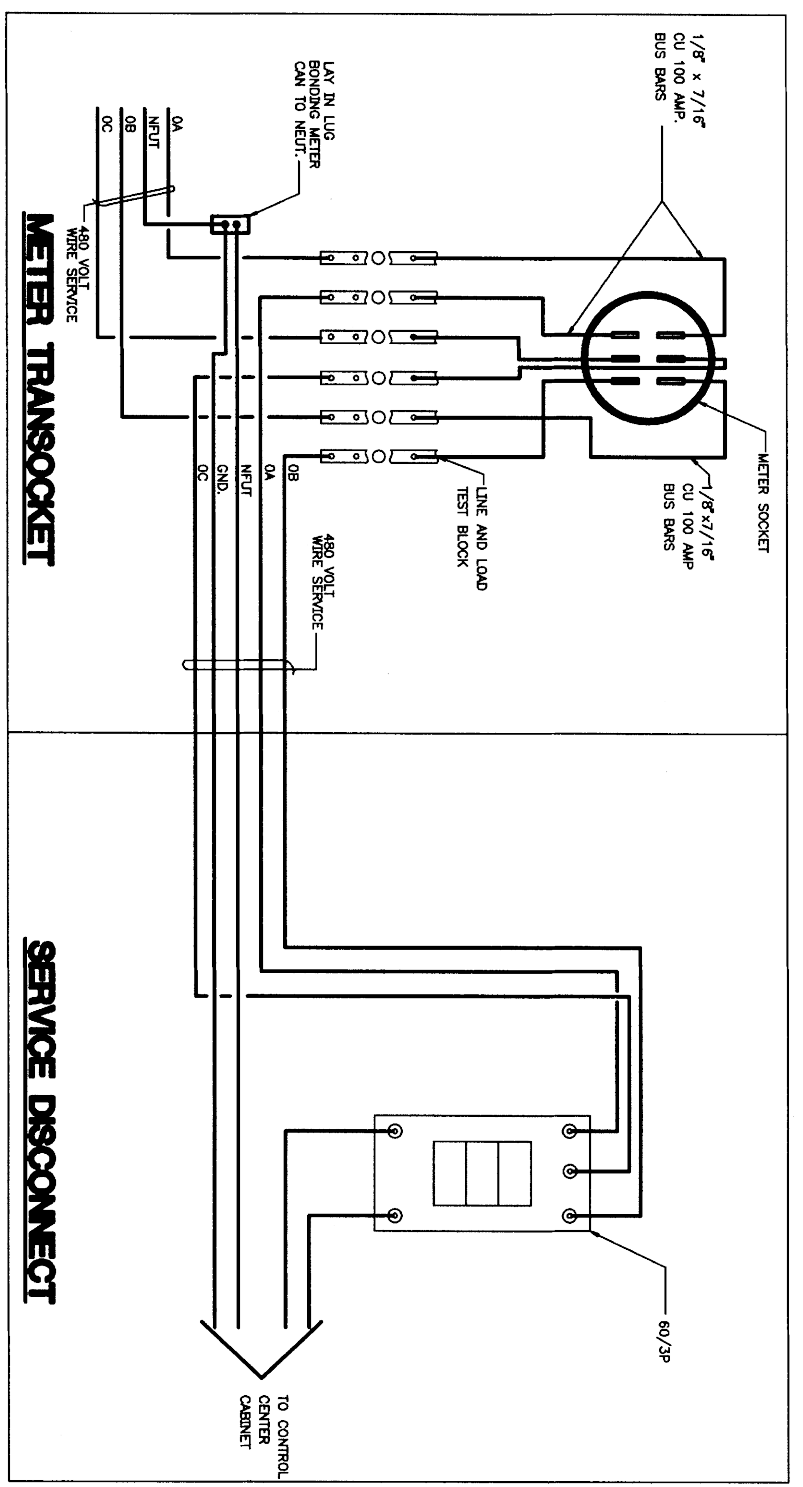
ADDISON ROAD IMPROVEMENTS
BELT LINE ROAD TO ARAPAHO ROAD PHASE I
ADDISON ROAD LANDSCAPE/LIGHTING

BIRKHOFF, HENDRICKS & CONWAY LLP.
 CONSULTING ENGINEERS

DESIGNED BY: J.M.B.
 PROJECT: ADD. IMP.
 DATE: OCTOBER 24, 2007
 DRAWN BY: J.M.B.
 SHEET NO. **E-6 (7)** OF **7** SHEETS



230407



This record drawing is a completion of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the completed design is the responsibility of the contractor. The completed drawings are the property of Birkhoff, Hendricks & Conway, L.L.P. By J.W.B. DATE 05/04/2010

- NOTES**
1. ALL SERVICE CONDUCTORS AND SWITCHES SHALL BE 60 AMP CAPACITY.
 2. ALL COMPONENTS ON 480 VOLT CIRCUIT SHALL BE RATED FOR 800 VOLT OPERATION. ALL COMPONENTS ON 120 VOLT CIRCUIT SHALL BE RATED FOR 250 VOLT OPERATION. ALL OTHER COMPONENTS SHALL BE RATED FOR 250 VOLT OPERATION.
 3. TYPICAL COMPONENT INSTALLATIONS ARE SHOWN. LEAVE SPACE FOR FUTURE INSTALLATIONS.
 4. ALL COMPONENTS SHALL BE INTERIOR MOUNTED.
 5. ALL LIVE ELECTRICAL COMPONENTS SHALL BE PROTECTED BY A DEAD-FRONT PANEL.
 6. ROUTE BARE COPPER SOLID GROUND CONTINUOUS FROM SERVICE GROUND BUS, THROUGH GROUND BUSHING, THROUGH LOAD CENTER GROUND BUS, TO GROUND ROD CLAMP.
 7. 2" CONDUIT CHASE NIPPLE, LOCK NUT AND GROUNDING BUSHING.



TOWN OF ADDISON, TEXAS

ADDISON ROAD IMPROVEMENTS
 BELT LINE ROAD TO ARAPAHO ROAD PHASE I
 ADDISON ROAD LANDSCAPE/LIGHTING

BIRKHOFF, HENDRICKS & CONWAY L.L.P.
 Dallas, Texas
 CONSULTING ENGINEERS

DESIGNED BY: J.W.B.
 PROJECT: ADDISON ROAD IMPROVEMENTS
 DRAWN BY: J.W.B. DATE: OCTOBER 24, 2007

SHEET NO. **E-8 (02)**
 OF 5 SHEETS

1 CONTROL CENTER WIRING DIAGRAM

SCALE: NONE

REVISION
 ELECTRICAL VOLTAGE CHANGES - OCTOBER 24, 2007

CEC CONSULTING ENGINEERS
 2302 47

II. GROUND RODS

A. MATERIALS

- All ground rods installed at electrical vertices, including supplemental lightning protection ground rods specified by the plans in other locations such as pole bases, shall be copper coated steel and labeled by a NRE. Rods shall be a minimum diameter of 5/8 inch. The length shall be a minimum of 8 feet. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets.
- Ground rod clamps shall be fitted to be in direct contact with the soil. Where concrete encasement is required, the clamp shall be fitted for concrete encasement.

B. CONSTRUCTION METHODS

- Ground rods installed in locations such as pole bases, to provide supplemental lightning protection need not be totally in contact with the soil. Where called for by the plans, rods may be encased in soil or concrete or any combination of soil and concrete. When concrete encased, the connection of the conductor to the rod shall be readily accessible for inspection or repairs. When driven into the soil the upper end shall be between 2 to 4 inches below finished grade.
- Ground rods shall not be placed in the same drilled hole as a timber pile.
- Ground rods shall be installed such that the end imprinted with the rod's part number is installed on the upper end.
- Non-conductive coatings such as concrete spall or shall be removed from the rod at the clamp location.
- Routing of lightning protection ground rod wires shall be run as short and straight as possible. Where bends are required they shall have a minimum radius of four inches.
- Unless specifically called for by the plans, conductors used for ground rod wires shall be non-metallic. Where metal conductors are specified, a grounding bushing and properly sized bending jumper shall be provided and properly installed on each end.
- Where rocky soil or a solid rock bottom is encountered when driving a ground rod and the horizontal trench placement method is the only viable solution, written authorization from the town must be required.

III. GROUND BOX

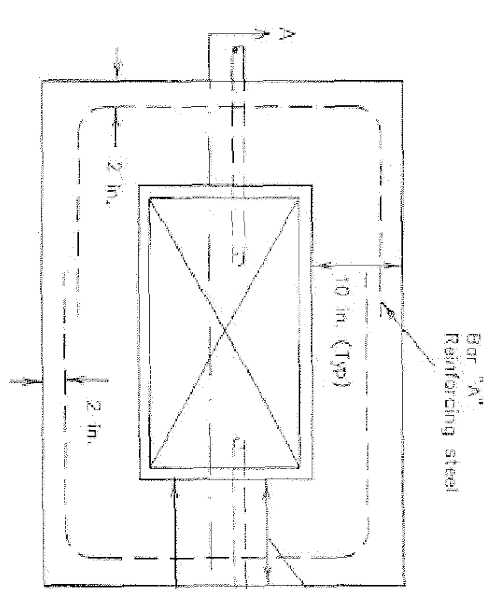
A. MATERIALS

- Ground boxes 16x36x4 inches (MIL-STD) or smaller shall be polymer concrete of the type required by the descriptive code shown elsewhere. Larger ground boxes shall be as shown elsewhere in the plans.
- All ground boxes and covers shall be permanently marked either by impress or by permanent ink, with manufacturer's model number and manufacturer's name or logo.
- Covers shall be bolted down, and bolt holes in the box shall be arranged to drain dirt.
- Ground box Types A, B, C, D & E shall meet the following requirements:
 - Ground boxes and covers will be manufactured from polymer concrete reinforced with continuous strands of woven or silted homogeneous fiberglass cloth. The polymer concrete shall be made from catalyzed polyester resin, sand and aggregate, and shall have a minimum compressive strength of 11,000 psi. Polymer concrete containing chopped fiberglass or fiberglass reinforced plastic is not acceptable.
 - Minimum inside dimensions shall be as follows: (width x length x depth)
 - Type A shall be 11.5 inches x 21 inches x 10 inches. (122311)
 - Type B shall be 15.25 inches x 28.25 inches x 10 inches. (182941)
 - Type C shall be 15.25 inches x 28.25 inches x 20 inches. (162922)
 - Type D shall be 11.5 inches x 21 inches x 15 inches. (122317)
 - Type E shall be 11.5 inches x 21 inches x 15 inches. (122317)
 - Bottom edge of box or extension shall be finished with a minimum 1/4 inch flange.
 - Ground boxes shall withstand 600 lbs. per sq. ft. applied over the entire sidewall with less than 1/4 inch deflection per foot length of box. Ground boxes and covers shall withstand a test loading of 20,000 lbs. over a 10 inch by 16 inch area, centered on the cover with less than 1/2 inch deflection. Ground boxes and covers shall meet Western Underground Standards 356. Manufacturer shall supply certification by an independent laboratory or sealed by a Texas-Licensed Professional Engineer.
 - Covers shall be 2 inch (nominal) thick polymer concrete. All hardware shall be stainless steel. Cover shall be secured with two 1/2 inch stainless steel bolts. Bolts shall be self-retaining and shall withstand a minimum of 70 foot-lb. torque and shall have a minimum 750 lbs. straight pull out strength. Nuts shall be locking and shall provide a minimum of 1/2 inch movement from the center of the nut. Covers shall be skid resistant, minimum 0.5 coefficient of friction. Covers shall be interchangeable between manufacturers and shall conform to the dimensions shown herein. Unless otherwise approved by the Engineer, cover shall be legibly imprinted with the following words in minimum 1 inch letters:
 - Ground Boxes containing wiring for traffic signals shall be labeled, Danger High Voltage Traffic Signal.
 - Ground boxes containing wiring for illumination systems shall be labeled, Danger High Voltage Illumination.
 - Ground boxes containing wiring for traffic management systems shall be labeled, Danger High Voltage Traffic Management.
 - Ground boxes containing wiring for sign illumination systems shall be labeled, Danger High Voltage Sign Illumination.

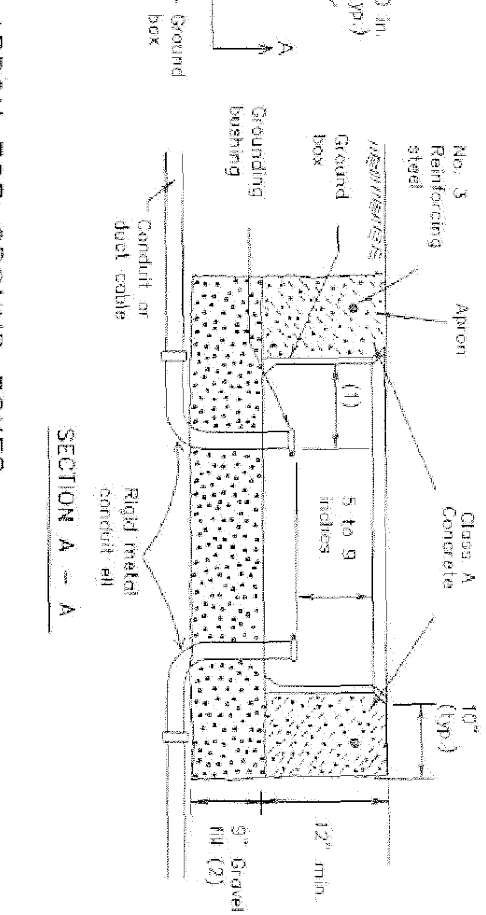
B. CONSTRUCTION METHODS

- Ground boxes shall be set on a 6 inch (minimum) bed of coarse No. 1 aggregate as defined by Item 421. Gravel shall be in place prior to setting box and contents shall be capped. Any gravel or silt in contact shall be removed.
- When required by item descriptive code, construction of an open encasing a ground box including concrete and reinforcing steel shall not be paid for directly but shall be subsidiary to the ground box. Reinforcing steel may be laid bent.
- Concrete for access shall be considered cast-in-place concrete for testing purposes. Access shall be cast in place.
- Conduit holes may be cut in the walls of Type B & D boxes of least 18 inches beneath the cover.
- It, within the limits of this project, the Contractor must utilize an existing ground box equipped with a metal cover. The Contractor shall bond the cover to the grounding conductor with a 3 foot long flexible stranded jumper the same size as the grounding conductor. Connection of bonding jumper to metal ground cover shall not be paid for directly but shall be subsidiary to various bid items. The bond(s) must be clearly shown on the plans with plan notes fully describing the work required.
- If there are other ground boxes with metal covers within the project limits but not involved in the contract, the Engineer may direct the Contractor to ground the covers, designating and identifying the specific boxes in writing. This work will be paid for separately.
- Termination to metal ground box covers shall be made using a lock ground type lug.

NO.	DATE	REVISION	APPENDIX
1			
2			
3			

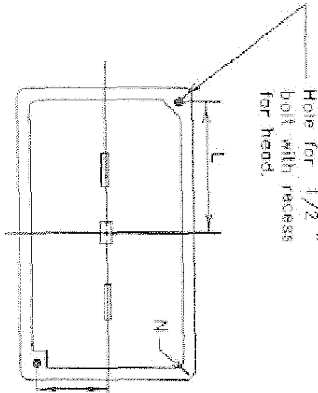


PLAN VIEW

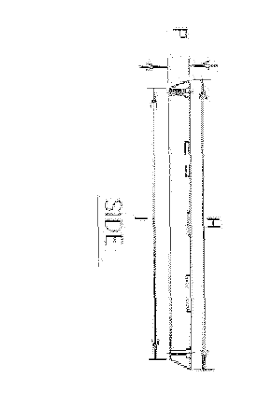
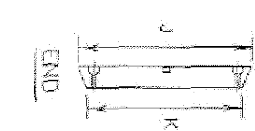


APRON FOR GROUND BOXES (Where required)

- Final position of end of conduit shall not exceed one-half the distance to the side of box opposite the conduit entry.
- Place gravel under the box, not in the box. Gravel should not encroach on the interior volume of the box.
- Install bushing on the upper end of all sills.
- Where a ground rod is present in the ground box, connect it to any and all equipment grounding conductors using a listed connector.
- Maintain sufficient space between all conduits so as to allow for proper installation of bushings.
- All conduits shall be installed in a neat and workmanlike manner.



PLAN VIEW



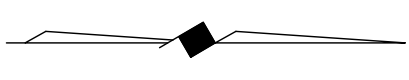
GROUND BOX COVER

GROUND BOX COVER DIMENSIONS										
BOX SIZE	H	I	J	K	L	M	N	P		
A, B & E	23 1/4	25	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2		
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2		

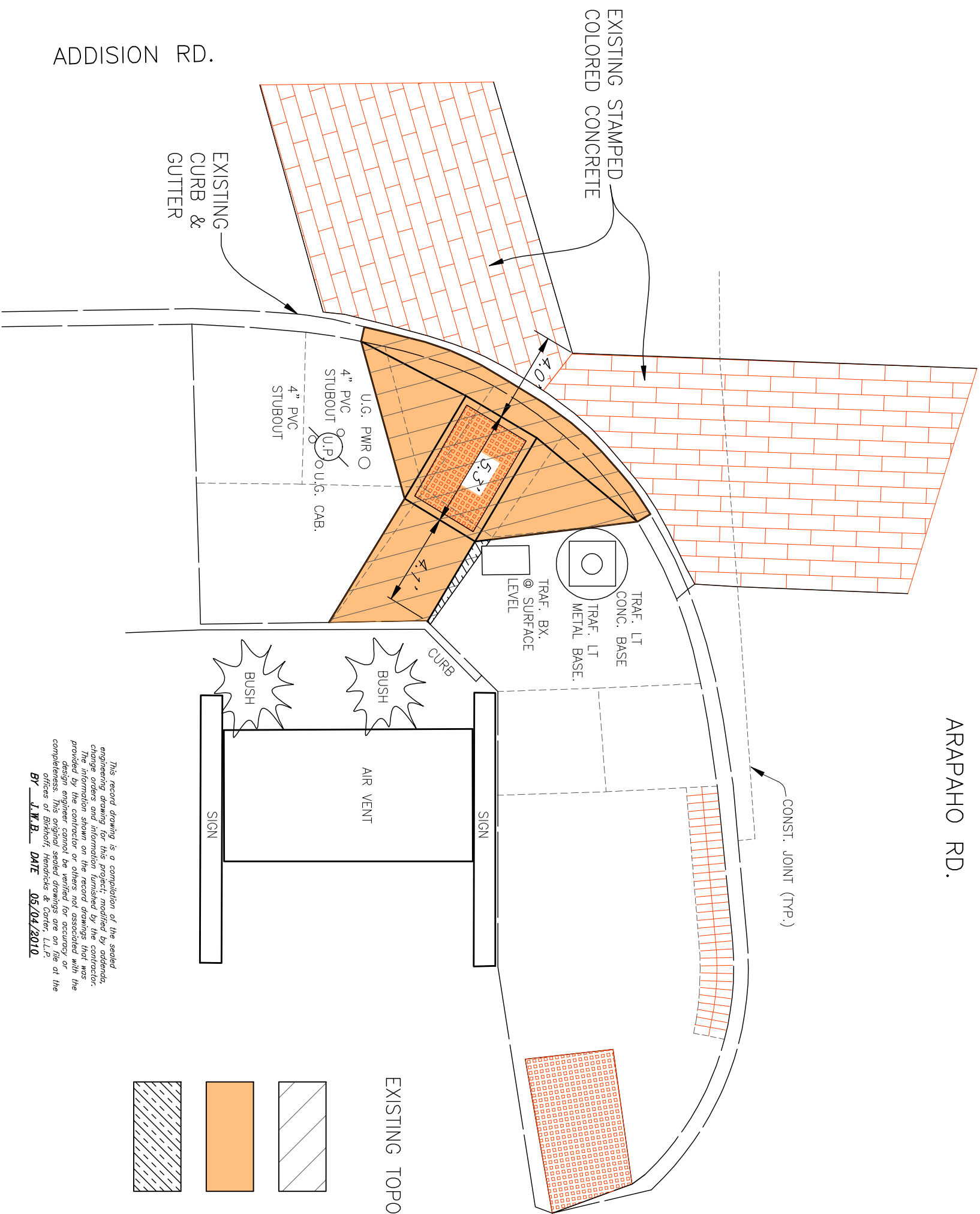
WILLIAM J. HATCHELL
 20755 S. WILSON
 AUSTIN, TEXAS 78758
 512-426-1111
 ON 7-21-04
 THE SEAL APPROVED ON THIS DRAWING IS VALID FOR THE STATE OF TEXAS. I AM THE RESPONSIBLE PROFESSIONAL ENGINEER FOR THESE DRAWINGS AND I AM NOT PROVIDING SEALING SERVICE.

DATE: MAY 2004 SCALE: NOT TO SCALE JOB NO.: 320
 DRAWN: GVA/DESIGN ENG REVIEWER: BNS/DWG: 320E/MLMS-ELEC
 ARAPAHO ROAD PHASE III
 STANDARD CONSTRUCTION DETAILS
 TRAFFIC SIGNAL ELECTRICAL SHEET 2
 TOWN OF ADDISON
 Grantham & Associates, Inc.
 9215611308100
 971864 2004 1A11
 SHIT-6

THIS DETAIL SHEET WAS OBTAINED FROM TxDOT

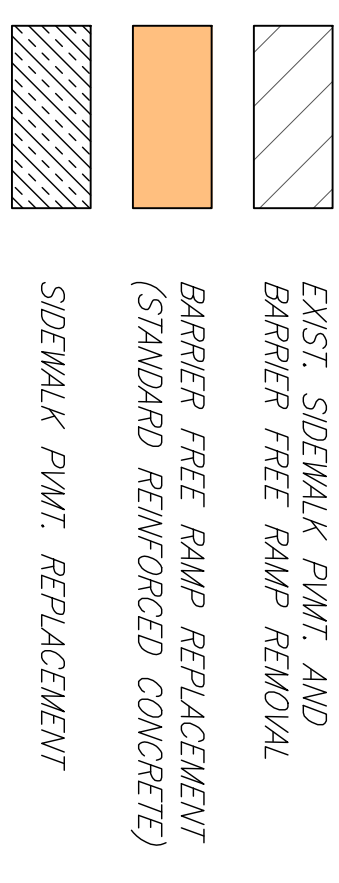


1" = 5'



ARAPAHO RD.

ADDISON RD.



EXISTING TOPO SURVEYED - FEB. 10, 2009

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 By J.M.B. DATE 05/04/2010

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 PROFESSIONAL ENGINEERS
 Texas Firm F526
 11910 Greenville Ave., Suite 600
 Dallas, Texas 75243 (214) 361-7900



THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 6/16/09

TOWN OF ADDISON, TEXAS
 ADDISON ROAD IMPROVEMENTS
 BARRIER FREE RAMP GEOMETRIES
 AT ADDISON ROAD & ARAPAHO ROAD

BHC PROJECT NO. 2008-197
 May 2010
 SHEET NO. **1**