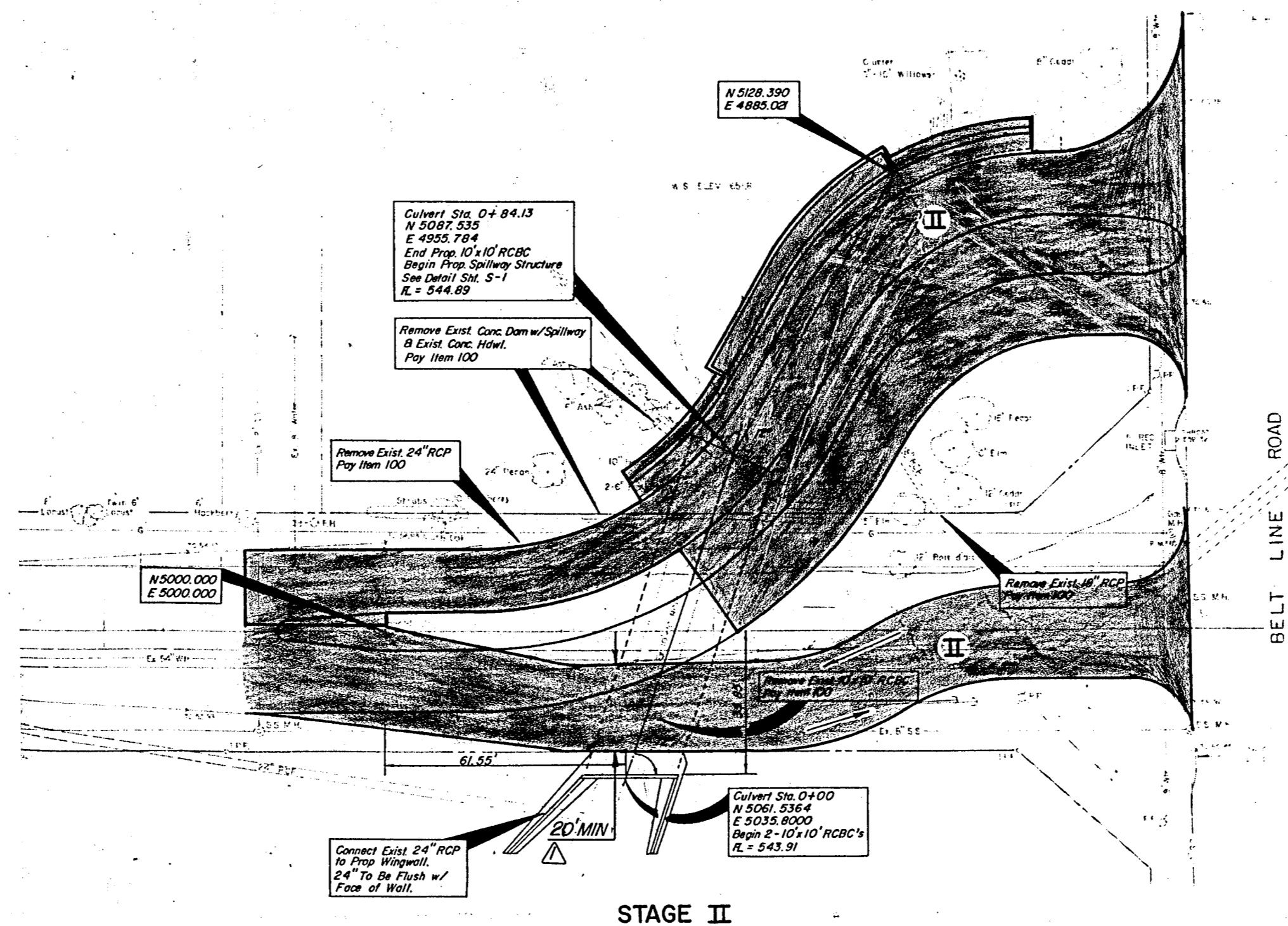
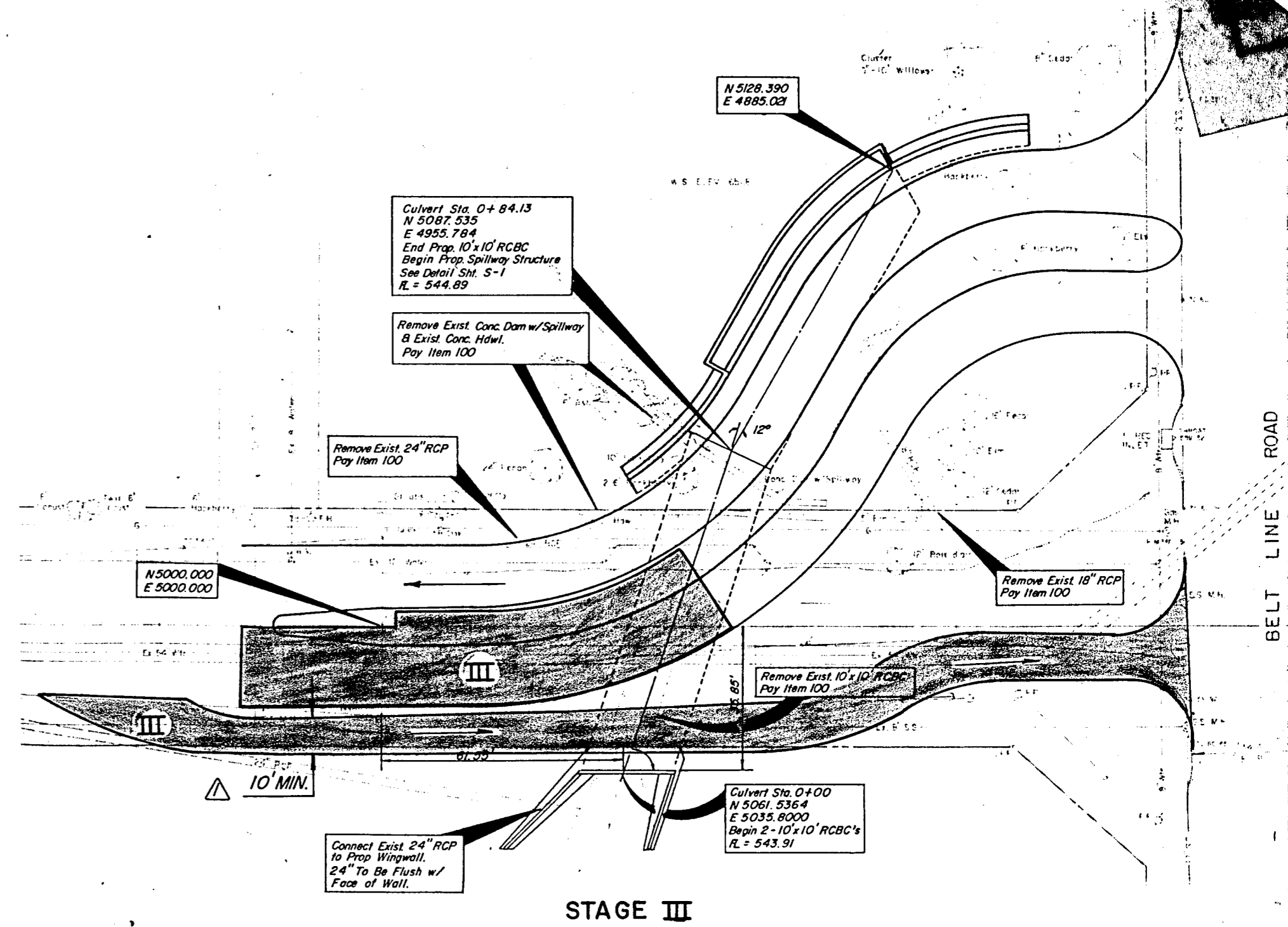


STAGE I



STAGE II



STAGE III

NOTE: Temp. Rdwy. Shall be 6" Flex Base Pay Item 249.1  
2" HMA CP, Type B, Pay Item 340.1

**SUGGESTED SEQUENCE FOR CONSTRUCTION** SEE SPECS FOR ADDITIONAL INFO.

**GENERAL NOTES**

**GENERAL:**

- The shoring system shown in this document is based on a geotechnical investigation report titled Winnwood Entrance, Addison, Texas, Job No. 3325, dated January 8, 1988, prepared by John H. Haynes and Associates, Inc.
- The General Contractor shall inspect the site prior to construction and notify the Engineer of any conditions which may adversely affect the reliability and safety of the excavation and shoring system. Trees, boulders, pavement and other surface encumbrances, located so as to create a hazard to employees involved in excavation work or in the vicinity thereof at any time during operations, shall be removed or made safe before excavating is begun. Existing underground utility lines shall also be located and protected during excavation and shoring. The shoring system specified herein has been designed for the safety of personnel only to hold back the earth banks and normal street traffic loads with the assumption that no construction equipment or material will be placed within 5 feet of the vertical cut and 2 feet of the sloped cuts. The shoring is not intended to support other loads such as existing utility lines or other structures.
- The Contractor shall field verify all dimensions.
- The Contractor shall provide and assume full responsibility for the adequacy of all shoring and underpinning necessary to complete the construction as outlined in this drawing.
- The Contractor shall provide, install and maintain protection barriers including guard rails for traffic control and safety as required by Occupational Safety and Health Administration.
- The Contractor shall do all work required for demolition of existing pavement, earth excavation, filling, compaction and grading within the limits shown on the drawings. He shall properly dispose of all materials except soil suitable for fill. Soil suitable for reuse shall be properly stored on the site at least 5 feet away from the edge of any vertical cut and 2 feet away from any sloped cut.
- Prior to demolition or excavation the Contractor shall locate all underground installations; i.e., telephone, water, fuel, electric, etc., that may be encountered during construction. All Utility companies of which the underground installations will be encountered shall be contacted and advised of the proposed work prior to the start of any demolition or excavation.
- The Contractor shall protect all excavations to avoid standing water from rain, landscape watering, etc. by the use of appropriate dewatering systems. The ground water levels will be shown on the Boring Logs represent its location on the day indicated. Ground water levels will fluctuate with the seasons and may be encountered during construction at a level other than that shown on the Boring Logs. The requirement for additional dewatering due to a raise in the water table shall be considered incidental to the work and shall be considered a part of the unit price bid.
- Prior to starting any construction, the Contractor shall establish and implement effective safety policies, there shall be cooperation from supervisors; employee groups, including unions; and individual employees.
- All excavations and shoring shall be inspected daily by a designated representative of the General Contractor who is qualified to detect dangerous ground movements and/or areas of weakened bracing. The contractor's representative shall also inspect all work after each rainstorm or when any change in condition occurs that can increase the possibility of a cave-in or slide.
- If evidence of possible cave-ins or slides is apparent or if the shoring appears to weaken in any area, all work in the excavation shall cease until the necessary precautions for bracing have been taken to safeguard the employees and trench.
- Any additional shoring installed for protection shall be incidental to the minimum design specified herein and shall be considered to be a part of the unit price bid. Any further excavation required to prohibit movement of sloped embankments or to remove soils which slough into the excavation shall be considered incidental to the work and shall be considered a part of the unit price bid.

**CODES & DESIGN SPECIFICATIONS:**

- Building Code: Addison Building Code, Latest edition.
- U. S. Department of Labor, Occupational Safety and Health Administration Publications: OSHA 1926 and 2226.

**EXCAVATION AND SHORING:**

- All excavating, trenching and shoring shall be in accordance with Subpart P, Part 1926 of OSHA Safety and Health Standards except where exceeded by these specifications. A latest copy of the OSHA Safety and Health Standards document shall be kept at the site.
- The general protection requirements of Subpart P, Part 1926 650 of OSHA Safety and Health Standards shall be implemented.
- Cantilever vertical piling shall not be installed within 10' horizontal distance of existing 54" water line. Spacing of vertical piling shall not exceed 6' c.c.
- W16X100 Steel Piling shall be centered in 36" diameter pier hole drilled a minimum of 14' into firm gray limestone below cut elevation 543.5' and shall extend to bottom of pier hole and held plumb until concreted.
- After placement of concrete to required depth, the contractor shall wait a minimum of 7 days prior to beginning excavation and only after verification that 3000 psi concrete strength has been attained.
- The material used for lagging between the wide flange steel piling shall be in good serviceable condition and timbers shall be sound, free from large or loose knots and of proper dimensions. Lagging shall be 4" thick (actual dimension).
- All shoring shall be installed to be effective from the top to the bottom of the excavation. Installation of the lagging shall start from the top of the cut and work down. Lagging shall fit snug between adjacent webs with no more than 1.5" clearance at each end. The lagging shall be properly secured to prevent sliding, falling or kickouts and it shall be wedged tightly between the flanges with blocking.
- Installation of the shoring shall closely follow the excavation work.

**MATERIAL USED FOR TIMBER SHORING:**

- All lumber shall conform to the requirements published in the SOUTHERN PINE INSPECTION BUREAU GRADING RULES, 1977 edition.
- Hardwood species defined by ASTM D 1165.
- Timbers used for shoring shall be in good serviceable condition and shall be sound and free of large or loose knots.
- The wood shoring material shall be untreated, sawn lumber, No. 2 grade, mixed oak, shall be appropriately marked and have minimum allowable stresses as follows:

Extreme fiber in bending "F <sub>b</sub> "	850 psi
Lagging	
Horizontal Shear "F <sub>v</sub> "	80 psi
Lagging	
Compression perpendicular to grain "F <sub>c</sub> "	355 psi
Lagging	
Compression parallel to grain "F <sub>c</sub> "	500 psi
Lagging	
Modulus of elasticity "E"	800,000 psi
Lagging	

**SLOPED CUTS:**

- All sloped cuts shown on this drawing shall be excavated to at least the angle of repose shown or flatter if needed for stability.
- Sloped cuts shall be kept free of all loose and stuffed material.

**STORAGE OF MATERIAL AND EQUIPMENT:**

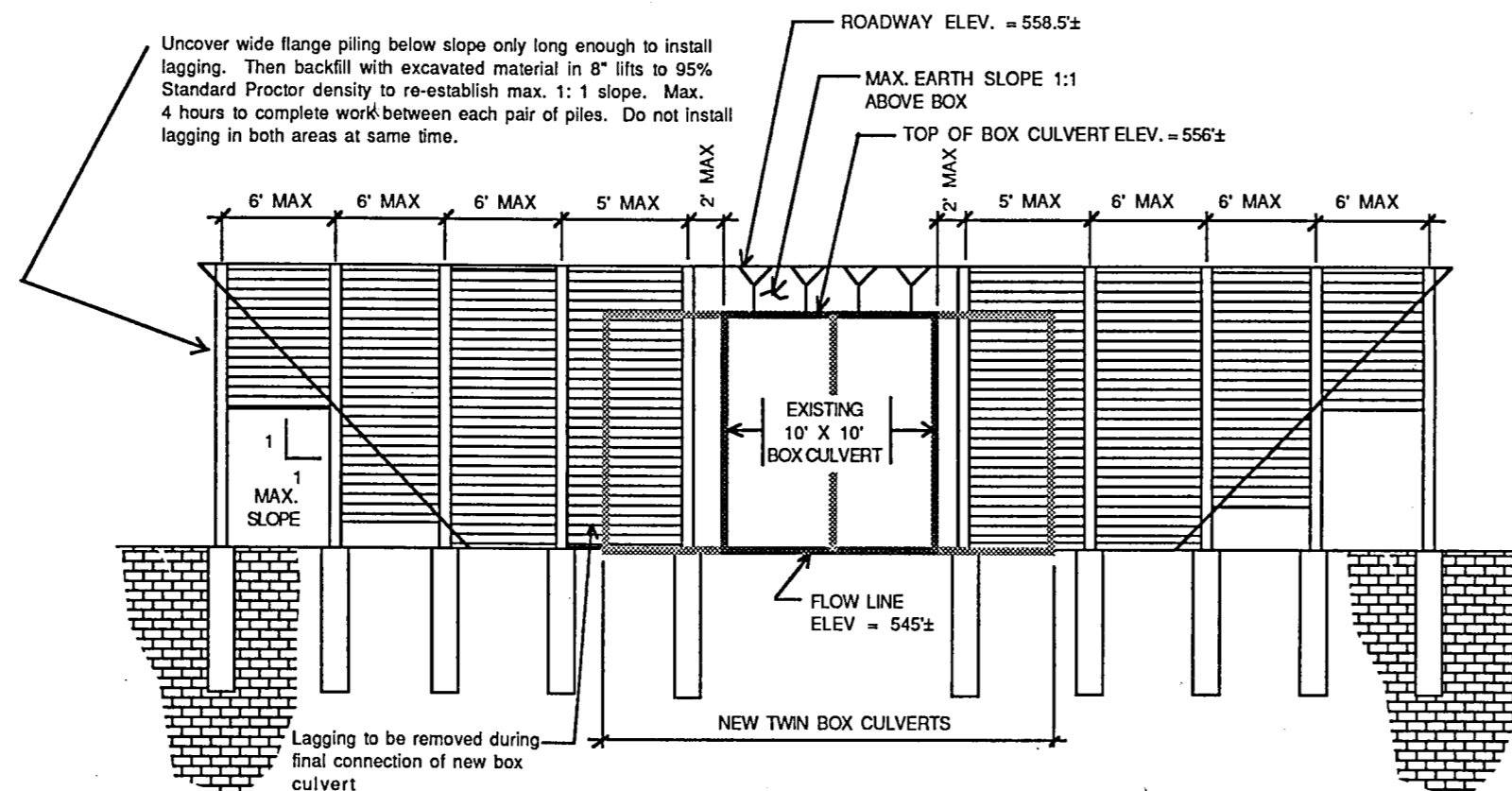
- Keep all areas free from debris, excavated soil, material and equipment at least 2 feet from the edge of sloped cuts and 5 feet from the edge of vertical cuts.
- Remove excess materials and debris from the site promptly to prevent large accumulation.

**PIER CONCRETE:**

- Concrete shall be placed with 5" slump ±1" and vibrated full depth. Concrete shall be placed to approximate elevation 543.5' to match future excavation grade.
- Concrete shall have minimum 3000 psi compressive strength at 7 days and minimum 4000 psi compressive strength at 28 days.
- Excavation shall not begin until 7 day strengths indicate compliance with these strength specifications.

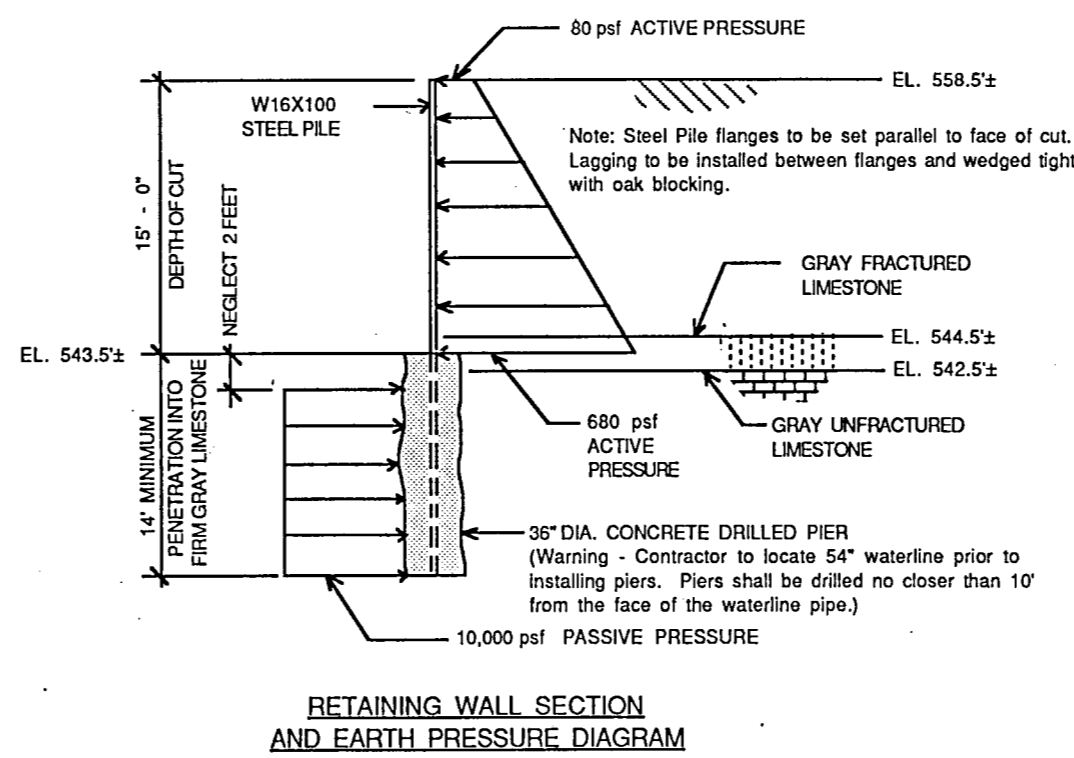
**STEEL PILING:**

- All wide flange sections used for piling shall meet all specification requirements of the AISC "Manual of Steel Construction", Eight Edition.
- All steel shall be grade ASTM A36.
- Each member shall be a single piece with no splice.

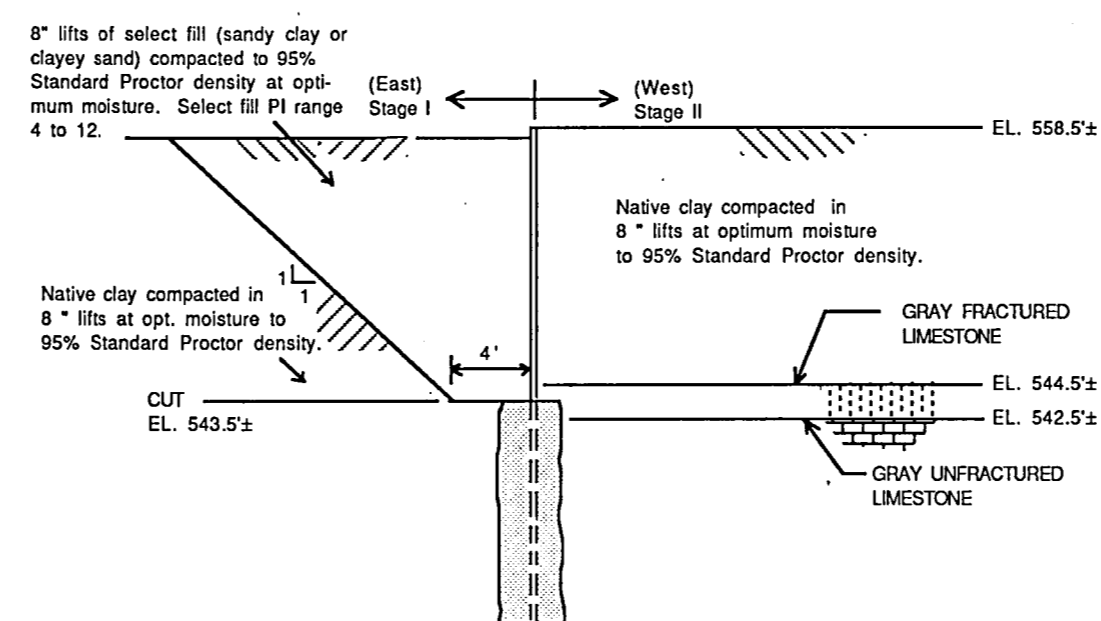


RETAINING WALL ELEVATION  
Not To Scale

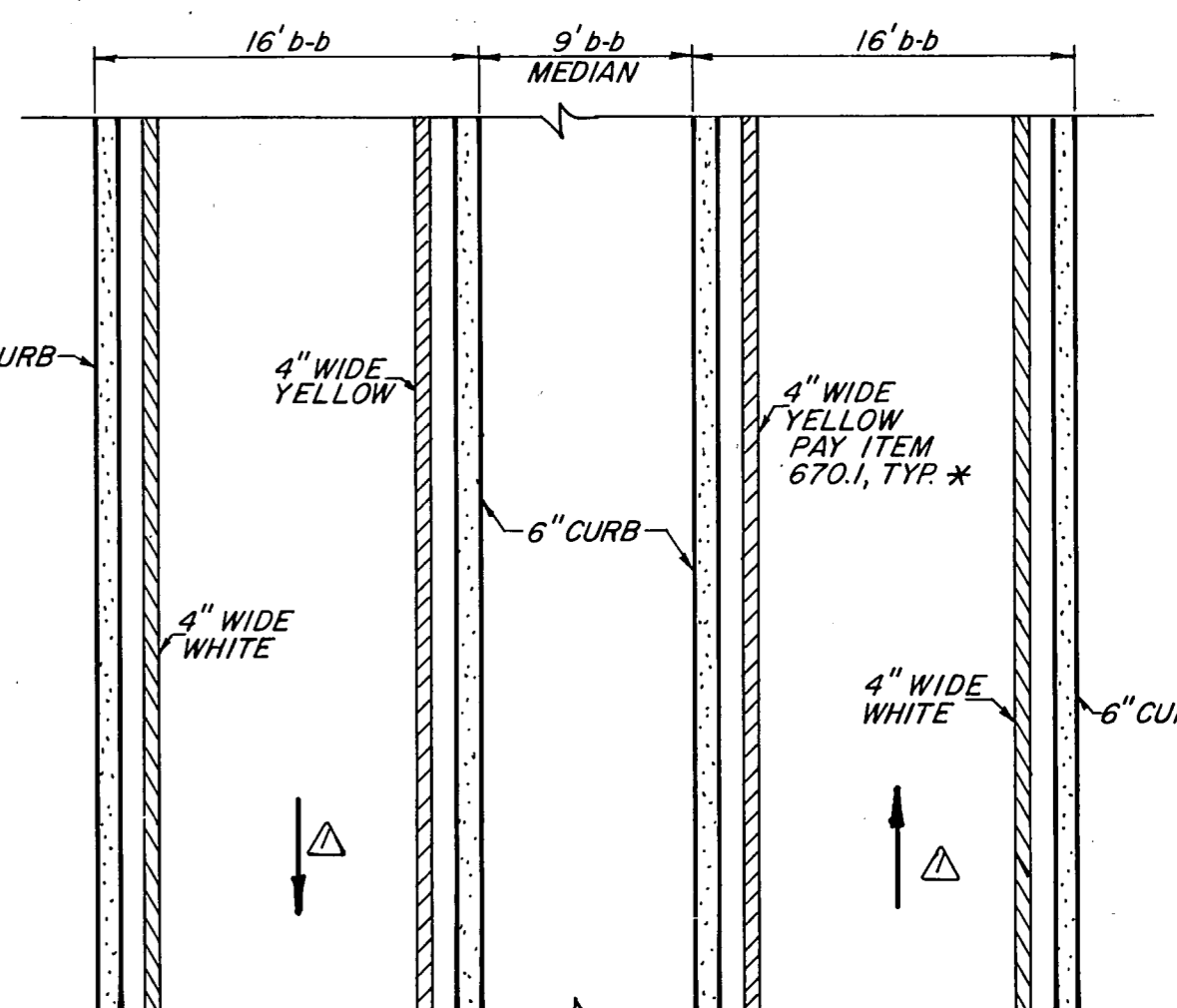
**SHORING SYSTEM  
PLANS AND SPECIFICATIONS**



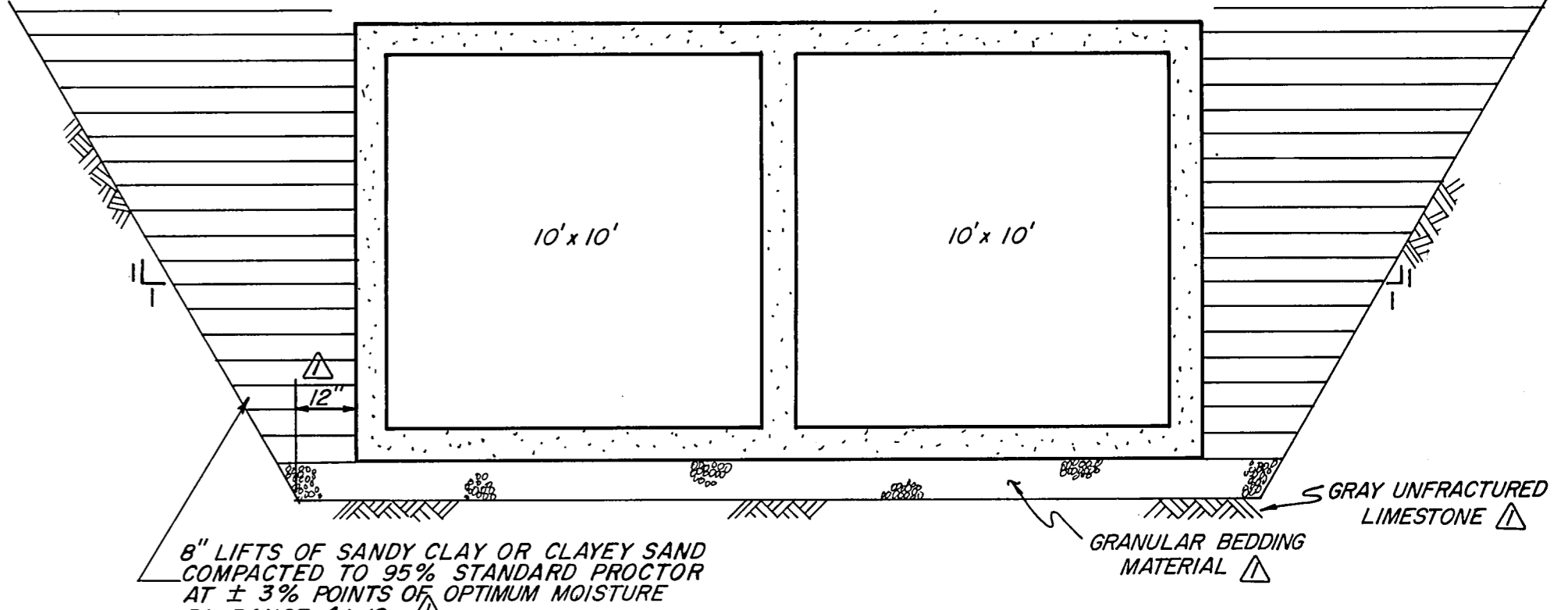
RETAINING WALL SECTION  
AND EARTH PRESSURE DIAGRAM  
Not To Scale



RETAINING WALL SECTION  
CUT AND FILL SEQUENCE  
Not To Scale



\* ALL COSTS ASSOCIATED WITH REFLECTORIZED PAINT SHALL BE INCLUDED IN PAY ITEM 670.1  
**STRIPING DETAIL**  
N.T.S.



**BOX CULVERT BACKFILL DETAIL**  
N.T.S.

**RECORD DRAWING**

ADDED DIMENSIONS, LABELS, & DIRECTION ARROWS AS SHOWN.		R.L.O. 16-3-88
No.	Revision	By Date
TOWN OF ADDISON DALLAS COUNTY, TEXAS <b>WINNWOOD CELESTIAL PHASE III</b> <b>WINNWOOD ROAD ENTRANCE</b> <b>MISCELLANEOUS DETAILS</b>		
<b>GINN, INC.</b> Consulting Engineers Dallas, Texas		
Designed - RCH	Drawn - DEM	Date - Feb., 1988
Approved - HWG	Checked - RCH	Scale - NONE
		Job No. - 328
		Sheet 12 of 13

*John H. Haynes*  
5/20/88

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