

CITY OF ORLANDO  
DEPARTMENT OF PUBLIC WORKS  
PROJECT NO. REM0002  
AT&T DUCT BANK RELOCATION

December 16, 2015  
100% CONSTRUCTION SET


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CITY COUNCIL OF ORLANDO  
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PREPARED BY :



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Certificate of Authorization # 3932

PROJECT LOCATION

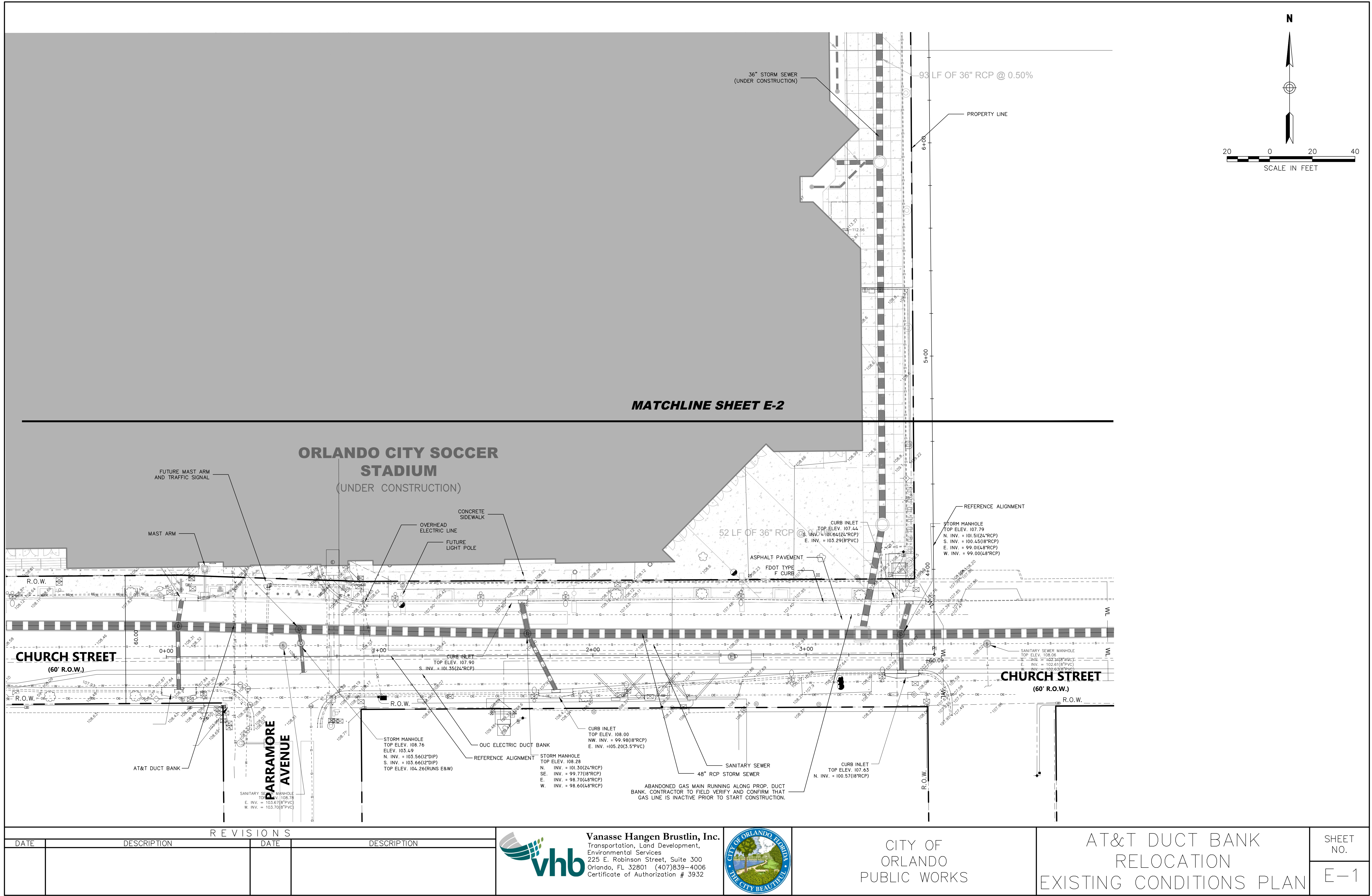


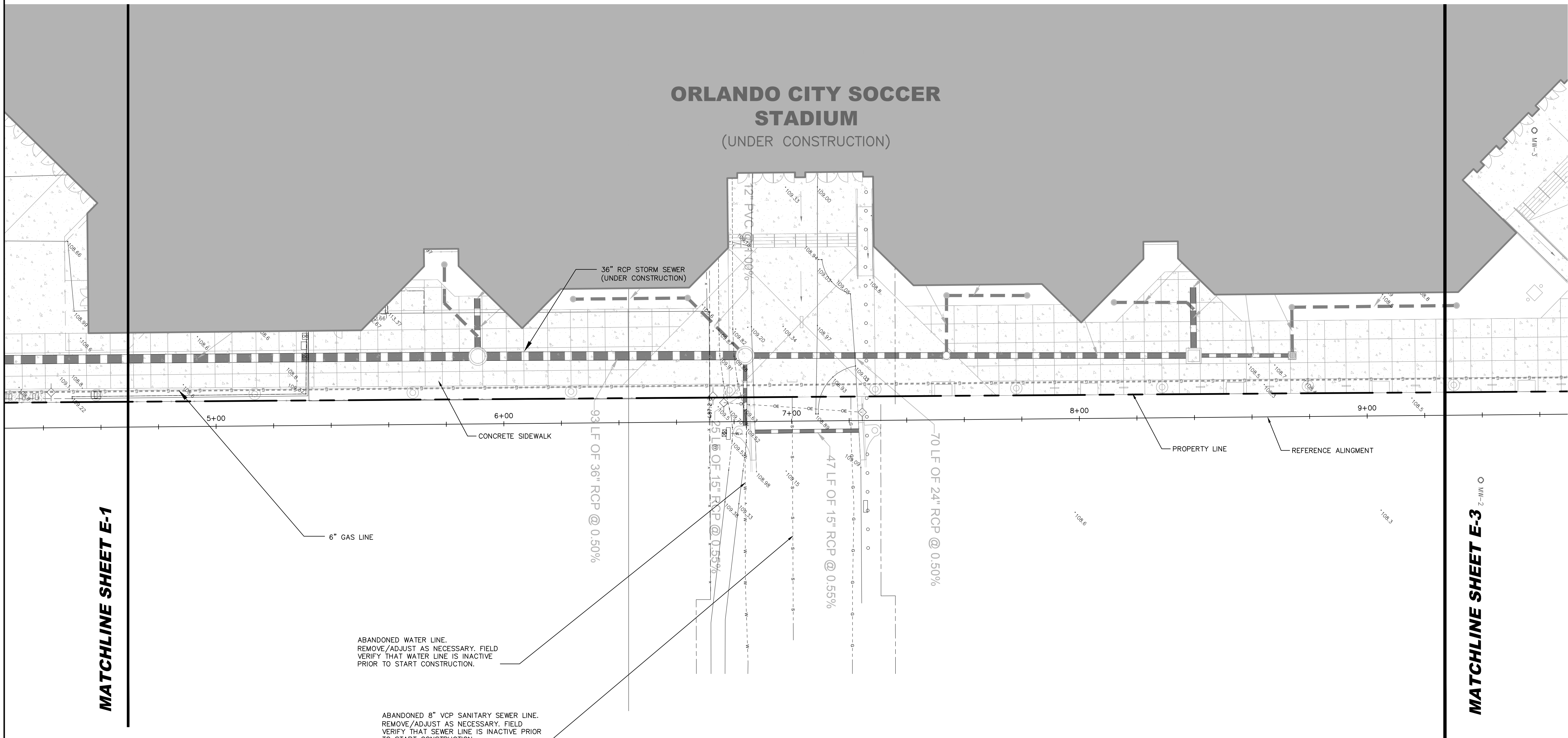
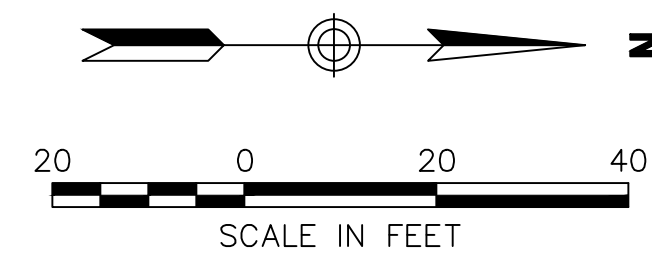
LOCATION MAP



GENERAL NOTES							
<div><div><div>1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE CITY OF ORLANDO, FDEP AND FDOT.</div><div>2. PAVEMENT STRIPING TO BE IN ACCORDANCE WITH THE FLORIDA D.O.T. ROADWAY &amp; TRAFFIC STANDARDS, INDEX17346, AND AS REQUIRED BY THE CITY OF ORLANDO.</div><div>3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF SIZE AND LOCATION OF ALL EXISTING UTILITIES AND RELATED CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK.</div><div>4. WHERE MUCK OR OTHER ORGANIC MATERIAL IS FOUND, IT SHALL BE REPLACED WITH GOOD QUALITY BACKFILL MATERIAL OBTAINED FROM THE GRADING OPERATIONS OR OTHER SOURCE APPROVED BY THE GEOTECHNICAL ENGINEER. THE ORGANIC MATERIAL SHALL BE THEN USED AS TOP DRESSING WHEN MIXED WITH CLEAN BACKFILL SOIL AS APPROVED BY THE GEOTECHNICAL ENGINEER OR PLACED AS APPROVED BY OWNER.</div><div>5. ALL FINISHED GRADES AND ELEVATIONS ARE AS DENOTED BY THE APPLICABLE LEGEND.</div><div>6. AS PART OF THE CLEARING AND GRUBBING OPERATION, THE CONTRACTOR IS TO REMOVE ALL FENCING AND/OR EXISTING FACILITIES FROM THE SITE UNLESS OTHERWISE NOTED.</div></div><div>WATER NOTES</div><div><div><div>1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN COMPLIANCE WITH AWWA STANDARDS AS WELL AS ORLANDO UTILITIES COMMISSION (OUC) AND CITY OF ORLANDO.</div><div>2. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN FITTINGS OF BRANCHES AND MAINS.</div><div>3. DEFLECTIONS AT PIPE JOINTS SHALL NOT EXCEED THOSE RECOMMENDED BY THE PIPE MANUFACTURER.</div><div>4. ALL GATE VALVES SHALL BE EQUIPPED WITH AN ADJUSTABLE CAST IRON VALVE BOX WITH COVER, WITH SLIP CAST BRONZE EXTENSIONS WHERE NEEDED.</div><div>5. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT, AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AS ADOPTED IN RULE 62-555.335, F.A.C., OR OTHER APPLIANCE STANDARDS, REGULATIONS, OR REQUIREMENTS, REFERENCED IN PARAGRAPH 62-555.320 (3)(b) F.A.C.</div><div>6. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL BE COLOR CODED IN ACCORDANCE WITH SUB PARAGRAPH 62-555.320 (21)(b)3, F.A.C. USING BLUE AS A PREDOMINANT COLOR. ALL DUCTILE IRON WATER MAINS SHALL BE MARKED WITH A CONTINUOUS STRIPE LOCATED WITHIN THE TOP 90 DEGREES OF THE PIPE. SAID STRIPE SHALL BE A MINIMUM 2 INCHES IN WIDTH AND SHALL BE BLUE IN COLOR. BACKFILL SHALL NOT BE PLACED FOR 30 MINUTES FOLLOWING PAINT APPLICATION. FOR PIPE WITH AN INTERNAL DIAMETER OF 24" OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES A LONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. METAL PIPES STRIPED DURING MANUFACTURING SHALL HAVE 4 CONTINUOUS CO-AXIAL LINE STRIPES AT 90° INTERVALS.</div><div>7. ALL NON-METALLIC WATER MAINS SHALL BE INSTALLED WITH A CONTINUOUS, INSULATED TO GAUGE COPPER WIRE INSTALLED DIRECTLY ON TOP OF THE PIPE FOR LOCATION PURPOSES. SEE STANDARD DRAWINGS. IN ADDITION, ALL PVC WATER MAINS SHALL BE A SOLID BLUE COLOR. ALL LETTERING SHALL APPEAR LEGIBLY ON PIPE AND SHALL RUN THE ENTIRE LENGTH OF THE PIPE. LETTERING SHALL READ AS IS ACCEPTABLE FOR THE INTENDED USE.</div><div>8. ALL NEW OR ALTERED PVC PIPE INCLUDED IN THIS PROJECT SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C605, AS INCORPORATED INTO RULE 62-555.330, F.A.C., AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600 AS INCORPORATED INTO RULE 62-555.330, F.A.C. WATER MAINS SHALL BE DISINFECTED AND BACTERIOLOGICALLY EVALUATED IN ACCORDANCE WITH RULE 62-555.340, F.A.C.</div><div>9. MARK SERVICES WITH 6" HIGH PIECE OF 2" X 4" PLANK PAINTED BLUE WITH LOT NUMBER CLEARLY MARED AND A "W" IMPRESSED IN CURB.</div><div>10. ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT SHALL CONFORM TO APPLICABLE AWWA STANDARDS OR BE IN ACCORDANCE WITH MANUFACTURER'S RECOMENDED PROCEDURES. PVC SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900. THE PVC SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND SHALL HAVE A DIMENSION RATIO (DR) OF 18. PIPE SHALL BE THE SAME O.D. AS DUCTILE IRON PIPE. PVC JOINT - SHALL BE IN ACCORDANCE WITH ASTM D3139. DUCTILE IRON - SHALL CONFORM TO ANSI/AWWA C150/C151. A MINIMUM OF CLASS 50 PIPE SHALL BE SUPPLIED. DUCTILE IRON JOINT - SHALL BE IN ACCORDANCE WITH ANSI A21.11 AND AWWA C111. SERVICES - SHALL BE IN ACCORDANCE WITH AWWA C901/C800 STANDARDS FOR POLYETHYLENE TUBING, CLASS 160.</div><div>11. WATER MAIN CONNECTION SHALL BE MADE UNDER THE SUPERVISION OF THE OUC. ALL VALVES SHALL BE OPERATED BY OUC PERSONNEL ONLY. WATER MAINS ARE TO BE DISINFECTED PER ANSI/AWWA C651-92 AND OUC STANDARDS FOR WATER MAIN CONSTRUCTION.</div></div><div>12. VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.<div><div>A. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.</div><div>B. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.</div><div>C. AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSING, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.</div><div>D. WHERE WATER MAINS CROSS SANITARY SEWER MAINS AND RECLAIM WATER MAINS, THE CITY OF ORLANDO ENGINEERING STANDARDS FOR WASTEWATER AND RECLAIMED WATER SHALL BE MET. MINIMUM VERTICAL SEPARATION OF 18" IS REQUIRED. WHERE IT IS NOT FEASIBLE TO MAINTAIN MINIMUM VERTICAL CLEARANCE, THE SANITARY SEWER AND / OR RECLAIM WATER LINE SHALL BE EPOXY LINED DUCTILE IRON PIPE FOR 20 L.F. CENTERED AT THE CROSSING PER CITY OF ORLANDO ESM. IN NO CASE SHALL PROVIDED SEPARATION BE LESS THAN FDEP MINIMUM SEPARATION AS SPECIFIED IN FAC 62-555.314 (1), (2), (3), AND (4).</div></div></div><div>13. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.<div><div>A. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.</div><div>B. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.</div><div>C. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.</div><div>D. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.</div><div>E. WHERE HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND POTABLE WATER LINES IS LESS THAN 10', THE SEWER PIPE SHALL BE CONSTRUCTED OF EPOXY LINED DIP W/ HIGH PRESSURE JOINTS. IN NO CASE SHALL PROVIDED SEPARATION BE LESS THAN FDEP MINIMUM SEPARATION AS SPECIFIED IN FAC 62-555.314 (1), (2), (3), AND (4).</div></div></div><div>14. A MINIMUM OF 3 FEET OF COVER SHALL BE MAINTAINED OVER WATERMAINS. ALL PORTIONS OF A WATERMAIN WITH LESS THAN 3 FEET OF COVER SHALL BE ANSI/AWWA C150/C151 DUCTILE IRON PIPE.</div><div>15. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL COMPLY WITH RULE 62-555.322, F.A.C., AND SHALL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT SHALL CONTAIN NO MORE THAN 0.2% LEAD.</div><div>16. NEW OR ALTERED DEAD-END WATER MAINS INCLUDED IN THIS PROJECT SHALL BE PROVIDED WITH A FIRE OR FLUSHING HYDRANT OR BLOW-OFF FOR FLUSHING PURPOSES.</div><div>17. NEW OR ALTERED FIRE HYDRANT LEADS INCLUDED IN THIS PROJECT SHALL HAVE A MINIMUM INSIDE DIAMETER OF 6" AND SHALL INCLUDE AN AUXILIARY VALVE.</div><div>18. IF AGGRESSIVE SOIL CONDITIONS ARE FOUND DURING CONSTRUCTION, WATER MAINS SHALL BE PROTECTED THROUGH THE USE OF CORROSION RESISTANT MATERIALS, THROUGH ENCASEMENT OF THE WATER MAINS IN POLYETHYLENE, OR THROUGH PROVISION OF CATHODIC PROTECTION.</div><div>19. ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED UNDER THIS PROJECT SHALL BE PROVIDED WITH RESTRAINED JOINTS TO PREVENT MOVEMENT.</div><div>20. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF A LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.</div></div></div>				PAVING AND DRAINAGE NOTES:			
<div><div>1. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCE BETWEEN CENTERLINES OF DRAINAGE STRUCTURES.</div><div>2. ALL MEDIANS AND ISLANDS TO BE FILLED WITH CLEAN SOIL.</div><div>3. ALL CONCRETE DRAINAGE STRUCTURES TO BE CONSTRUCTED PER D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED.</div><div>4. DITCH BOTTOM AND CONTROL STRUCTURE INLET GRATES SHALL BE SECURED WITH CHAIN AND EYEBOLT.</div><div>5. FIVE (5) FEET OF SOD IS REQUIRED AROUND ALL DITCH BOTTOM INLETS, MANHOLES, HEADWALLS AND MITERED END SECTIONS.</div><div>6. CONTRACTOR SHALL PLACE BLUE REFLECTIVE MARKERS ON PAVEMENT IN FRONT OF FIRE HYDRANTS.</div><div>7. TOP ELEVATIONS OF MANHOLES IN GRASSED AREAS SHALL BE AT MINIMUM 4 INCHES ABOVE FINISH GRADE.</div><div>8. MINIMUM LONGITUDINAL SLOPE OF CURB SHALL BE 0.30%.</div><div>9. CONTRACTOR SHALL CONTACT AND COORDINATE ALL CONSTRUCTION ACTIVITIES RELATED TO THE MASS GRADING, POND EXCAVATION &amp; EXFILTRATION VAULT SYSTEM WITH THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.</div><div>11. SIDEWALKS (WIDTHS AS SPECIFIED BY APPROPRIATE ROADWAY SECTION) ADJACENT TO ALL RESIDENTIAL LOTS TO BE INSTALLED BY HOME BUILDER. SIDEWALKS TO BE CONSTRUCTED WITH INFRASTRUCTURE SHOWN ON SHEET C6.01-C6.02.</div><div>12. ALL STORM PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED. ANY PROPOSED MATERIAL CHANGES MUST BE APPROVED IN ADVANCE BY THE ENGINEER OF RECORD AND THE CITY OF ORLANDO.</div><div>13. ALL OUTFALL PIPES FROM STORMWATER PONDS TO BE REINFORCED CONCRETE PIPE (RCP).</div></div> <div>AS-BUILT NOTES:</div> <div><div>1. THE CONTRACTOR SHALL SUBMIT A CERTIFIED SET OF RECORD DRAWINGS TO THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING INFORMATION ON THE APPROVED PLANS CONCURRENTLY WITH CONSTRUCTION PROGRESS. RECORD DRAWINGS SUBMITTED TO THE ENGINEER AS PART OF THE PROJECT ACCEPTANCE SHALL COMPLY WITH CITY OF ORLANDO, SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) AND OUC REQUIREMENTS AND THE FOLLOWING REQUIREMENTS:<div><div>A. DRAWINGS SHALL BE LEGIBLY MARKED TO RECORD ACTUAL CONSTRUCTION.</div><div>B. DRAWINGS SHALL SHOW ACTUAL LOCATION OF ALL UNDERGROUND AND ABOVE GROUND STORM DRAINAGE, WATER AND WASTEWATER PIPING AND RELATED APPURTENANCES. ALL CHANGES TO PIPING LOCATION INCLUDING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES AND APPURTENANCES SHALL BE CLEARLY SHOWN AND REFERENCED TO STATE PLANE COORDINATES. DRAWINGS SHALL ALSO SHOW ACTUAL INSTALLED PIPE MATERIAL, SIZE, CLASS, ETC.</div><div>C. DRAWINGS SHALL CLEARLY SHOW ALL UTILITIES ELEVATIONS AT ALL WATER CROSSING LOCATIONS.</div><div>D. DRAWINGS SHALL CLEARLY SHOW ALL FIELD CHANGES OF DIMENSION AND DETAIL INCLUDING CHANGES MADE BY FIELD ORDER OR BY CHANGE ORDER.</div><div>E. DRAWINGS SHALL CLEARLY SHOW ALL DETAILS NOT ON ORIGINAL CONTRACT DRAWINGS, BUT CONSTRUCTED IN THE FIELD. ALL EQUIPMENT AND PIPING RELOCATION SHALL BE CLEARLY SHOWN.</div><div>F. LOCATION OF ALL INLETS, MANHOLES, HYDRANTS, VALVES AND VALVE BOXES SHALL BE SHOWN. ALL VALVES SHALL BE REFERENCED BY STATE PLANE COORDINATES.</div><div>G. DIMENSIONS BETWEEN ALL INLETS, MANHOLES AND CONTROL STRUCTURES SHALL BE FIELD VERIFIED AND SHOWN. THE INVERTS AND GRADE ELEVATIONS OF ALL INLETS AND MANHOLES SHALL BE SHOWN. THE INVERTS AND GRADE ELEVATIONS, AS WELL AS LENGTH &amp; ELEVATIONS OF WEIRS/SKIMMERS OF CONTROL STRUCTURES SHALL BE SHOWN.</div><div>H. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY FOR POND GRADING. ONE-FOOT CONTOURS SHALL BE PROVIDED BETWEEN THE TOP OF BANK AND GRADE BREAK (BELOW NORMAL CONTROL). SPOT SHOTS SHALL BE PROVIDED AT 50' INTERVALS ALONG THE POND BOTTOM. A CONTOUR SHALL BE PROVIDED AT THE DESIGN TOP OF BANK ELEVATION.</div><div>I. EACH SHEET OF THE PLANS SHALL BE SIGNED, SEALED AND DATED BY REGISTERED SURVEYOR WITH A NOTE READING "THESE AS-BUILT DRAWINGS ACCURATELY DEPICT THE ACTUAL IMPROVEMENTS AS CONSTRUCTED".</div><div>J. WHERE THE WATER MAIN CROSSES OTHER UTILITIES (STORM, GRAVITY SEWER, FORCEMAIN AND RECLAIMED WATER), THE CERTIFIED AS-BUILT DRAWINGS SHALL CLEARLY INDICATE THE CONSTRUCTED ELEVATIONS IN SUCH A WAY THAT THE VERTICAL SEPARATION BETWEEN THE WATER MAIN AND OTHER UTILITIES MAY BE VERIFIED BY THE ENGINEER. FAILURE TO PROVIDE THIS INFORMATION WILL RESULT IN THE CONTRACTOR EXCAVATING AND SURVEYING THE UTILITIES AT NO ADDITIONAL COST TO THE OWNER.</div><div>K. WHERE THE WATER MAIN CROSSES OTHER UTILITIES (STORM, GRAVITY SEWER, FORCEMAIN AND RECLAIMED WATER), THE CERTIFIED AS-BUILT DRAWINGS SHALL CLEARLY INDICATE THE LOCATIONS OF PIPE JOINTS IN SUCH A MANNER AS TO DEMONSTRATE THE PIPE IS CENTERED AT ALL THE CROSSING. FAILURE TO PROVIDE THIS INFORMATION WILL RESULT IN THE CONTRACTOR EXCAVATING AND SURVEYING THE UTILITIES AT NO ADDITIONAL COST TO THE OWNER.</div><div>L. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY FOR ALLEY CURB ELEVATIONS. SURVEY SPOT ELEVATION LOCATIONS TO CORRESPOND TO LOT LINES.</div></div></div></div>							
R E V I S I O N S				<div><div><div><div></div><div></div><div></div></div><div><div>Vanasse Hangen Brustlin, Inc.</div><div>Transportation, Land Development, Environmental Services 225 E. Robinson Street, Suite 300 Orlando, FL 32801 (407)839-4006 Certificate of Authorization # 3932</div></div></div><div><div><div></div><div></div><div></div></div><div><div>CITY OF ORLANDO PUBLIC WORKS</div></div></div></div>	AT&T DUCT BANK RELOCATION GENERAL NOTES	SHEET NO.	
DATE	DESCRIPTION	DATE	DESCRIPTION			T-2	







R E V I S I O N S			
DATE	DESCRIPTION	DATE	DESCRIPTION



**Vanasse Hangen Brustlin, Inc.**  
Transportation, Land Development,  
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Orlando, FL 32801 (407)839-4006  
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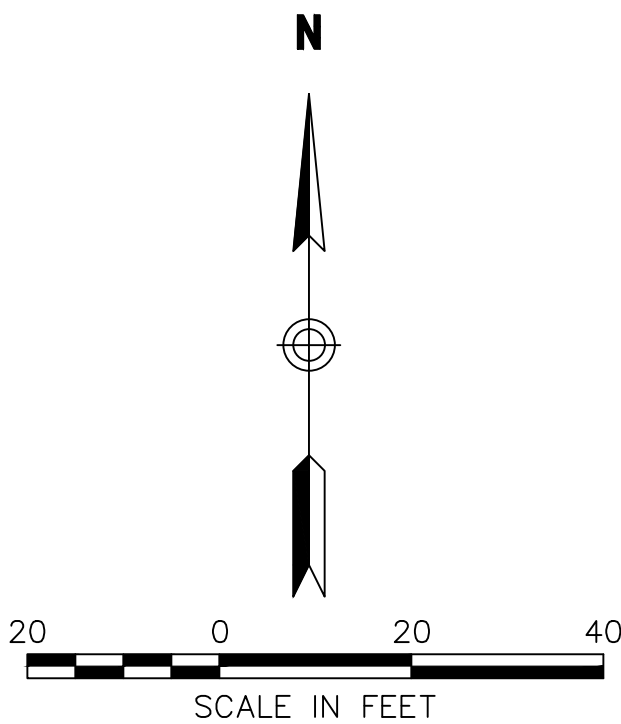
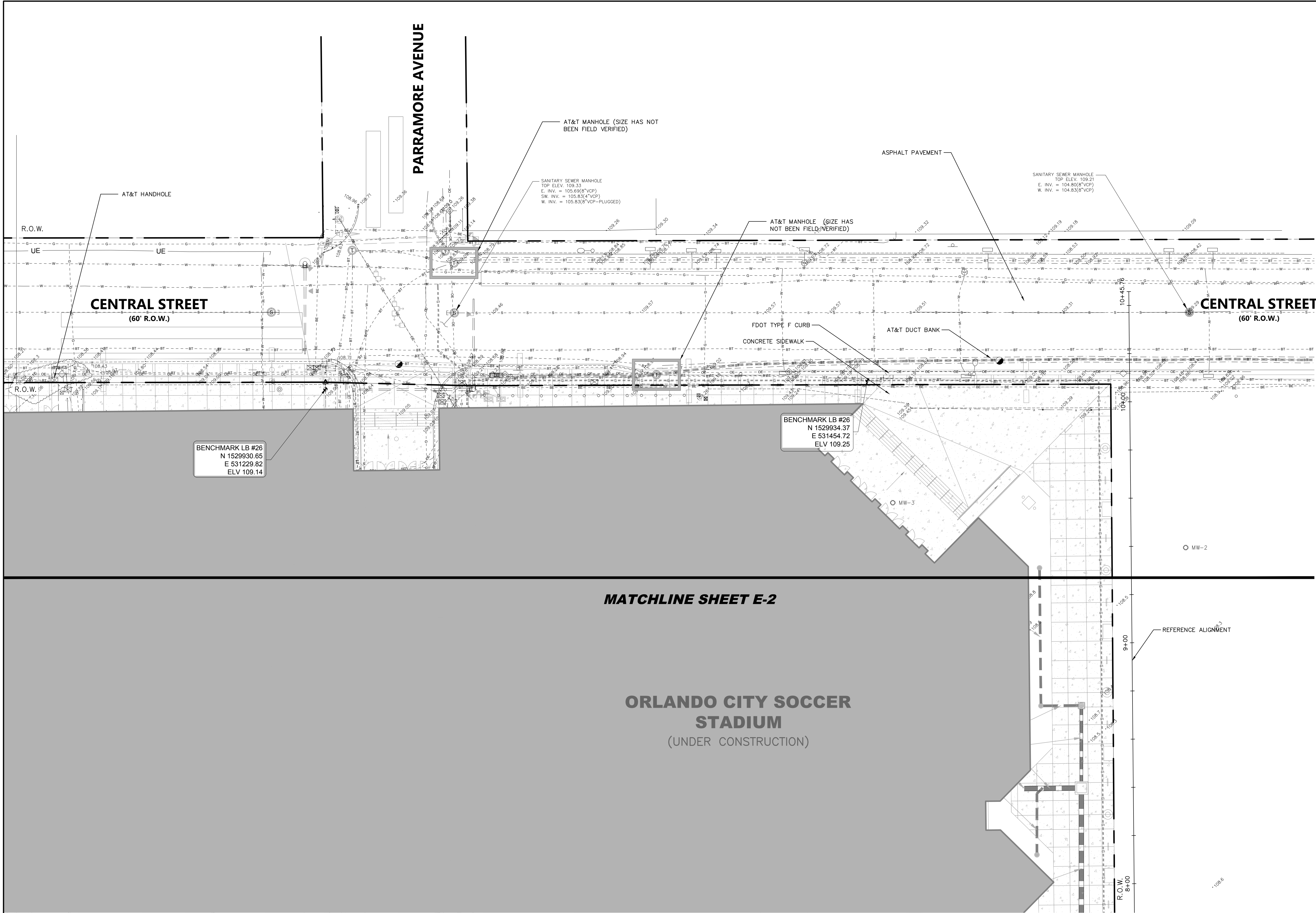


CITY OF  
ORLANDO  
PUBLIC WORKS


AT&T DUCT BANK  
RELOCATION  
EXISTING CONDITIONS PLAN

SHEET  
NO.  
E-2






R E V I S I O N S			
DATE	DESCRIPTION	DATE	DESCRIPTION



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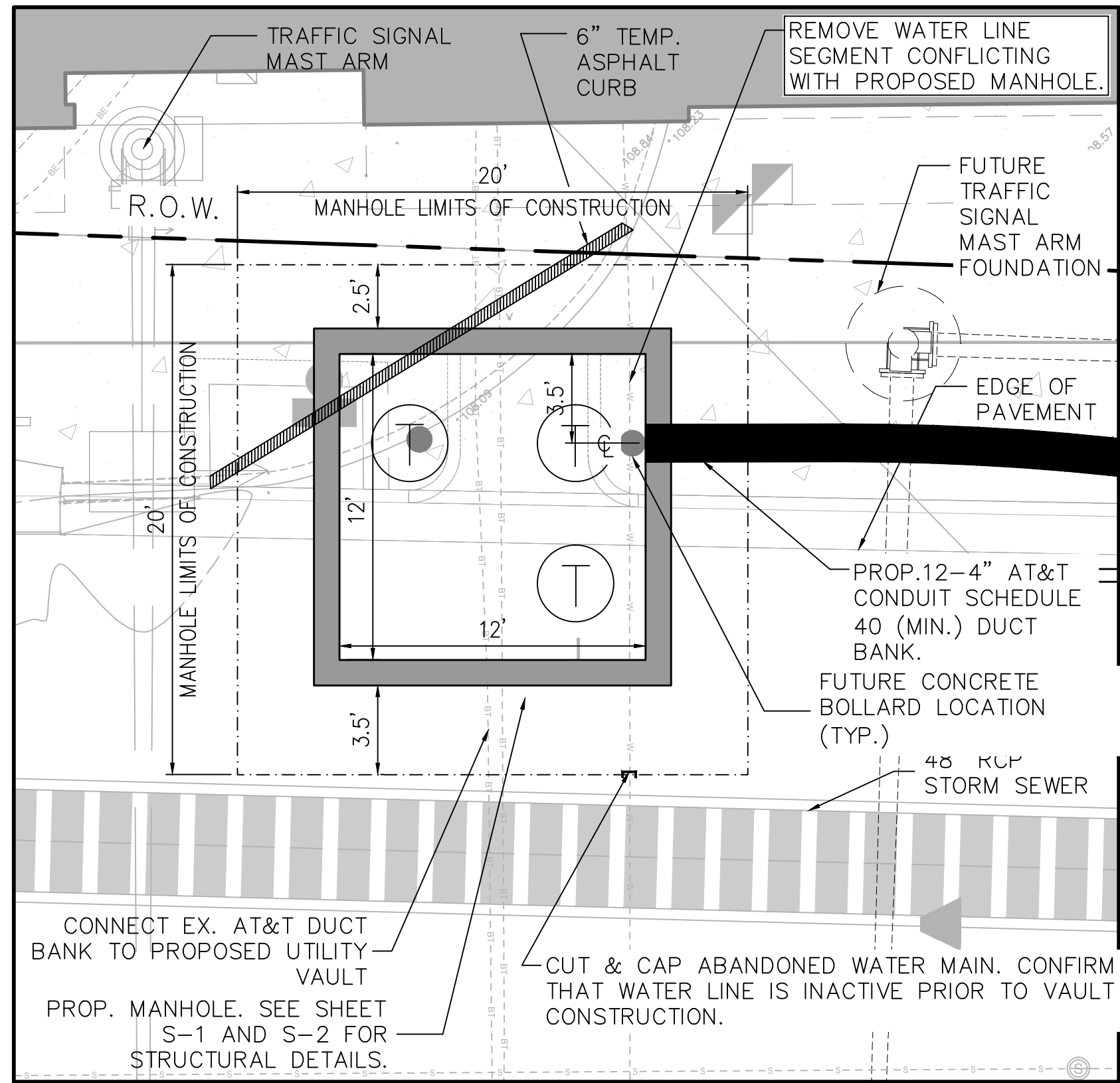


CITY OF  
ORLANDO  
PUBLIC WORKS

AT&T DUCT BANK  
RELOCATION  
EXISTING CONDITIONS PLAN

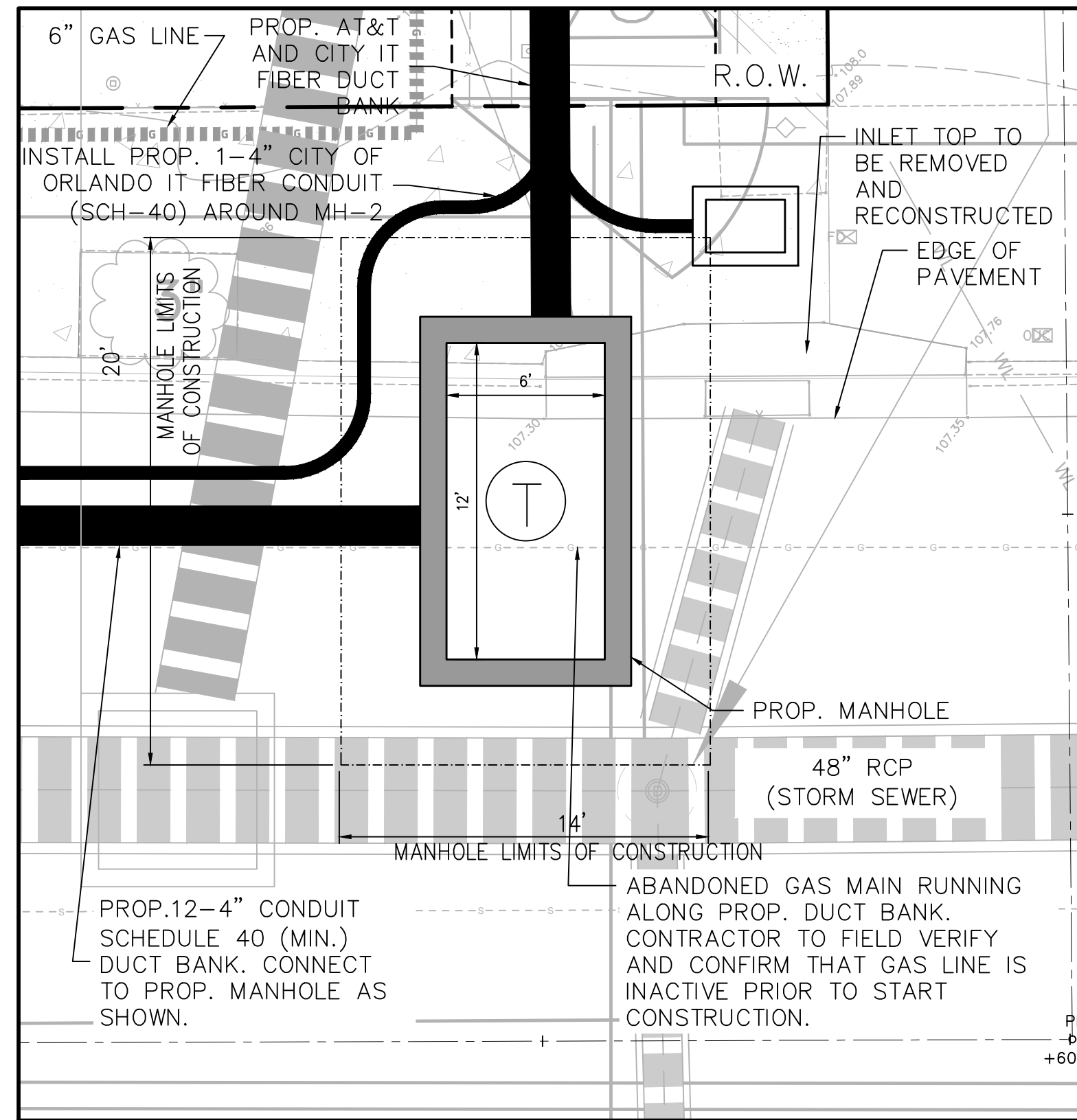
SHEET  
NO.  
E-3





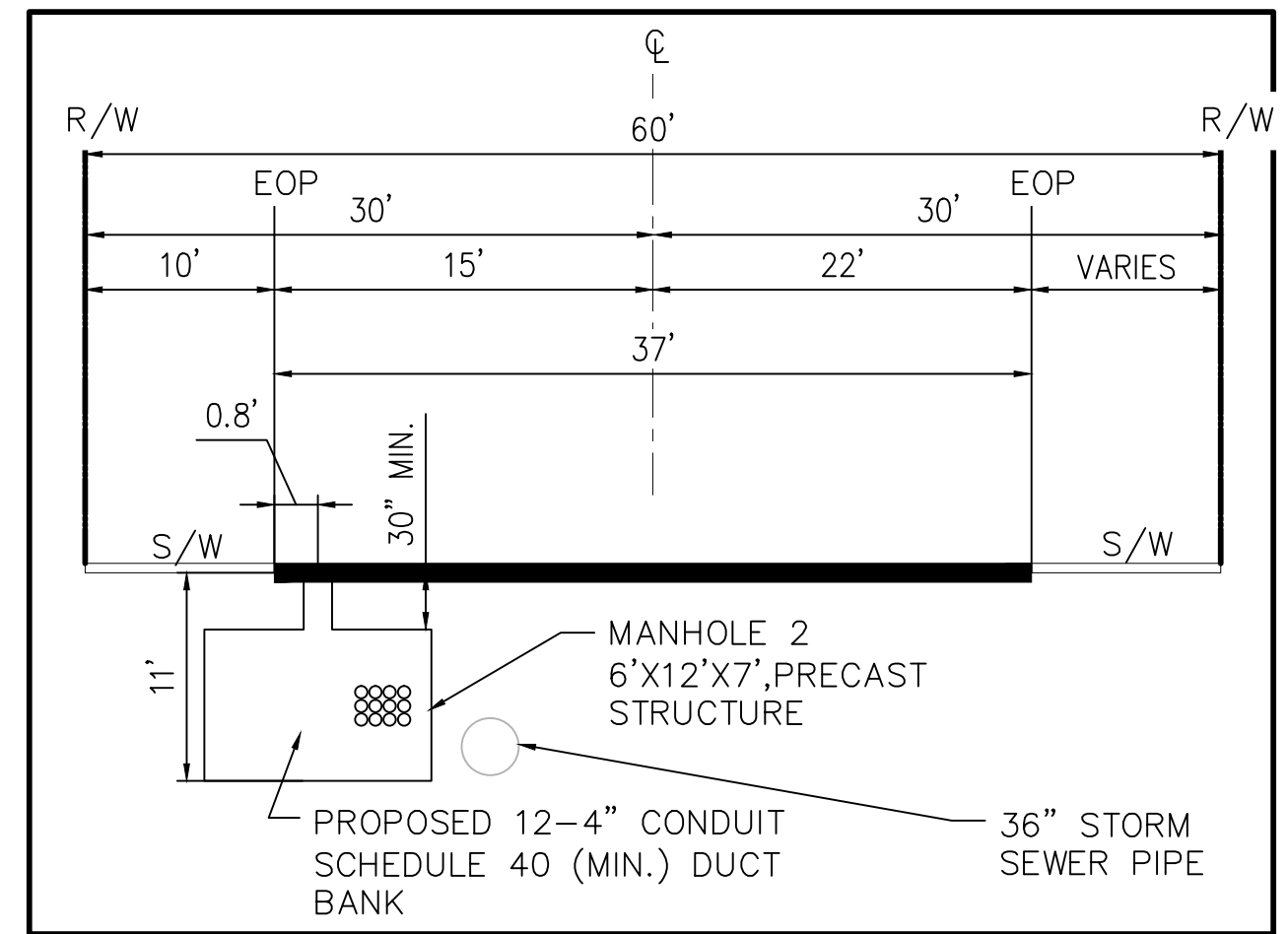
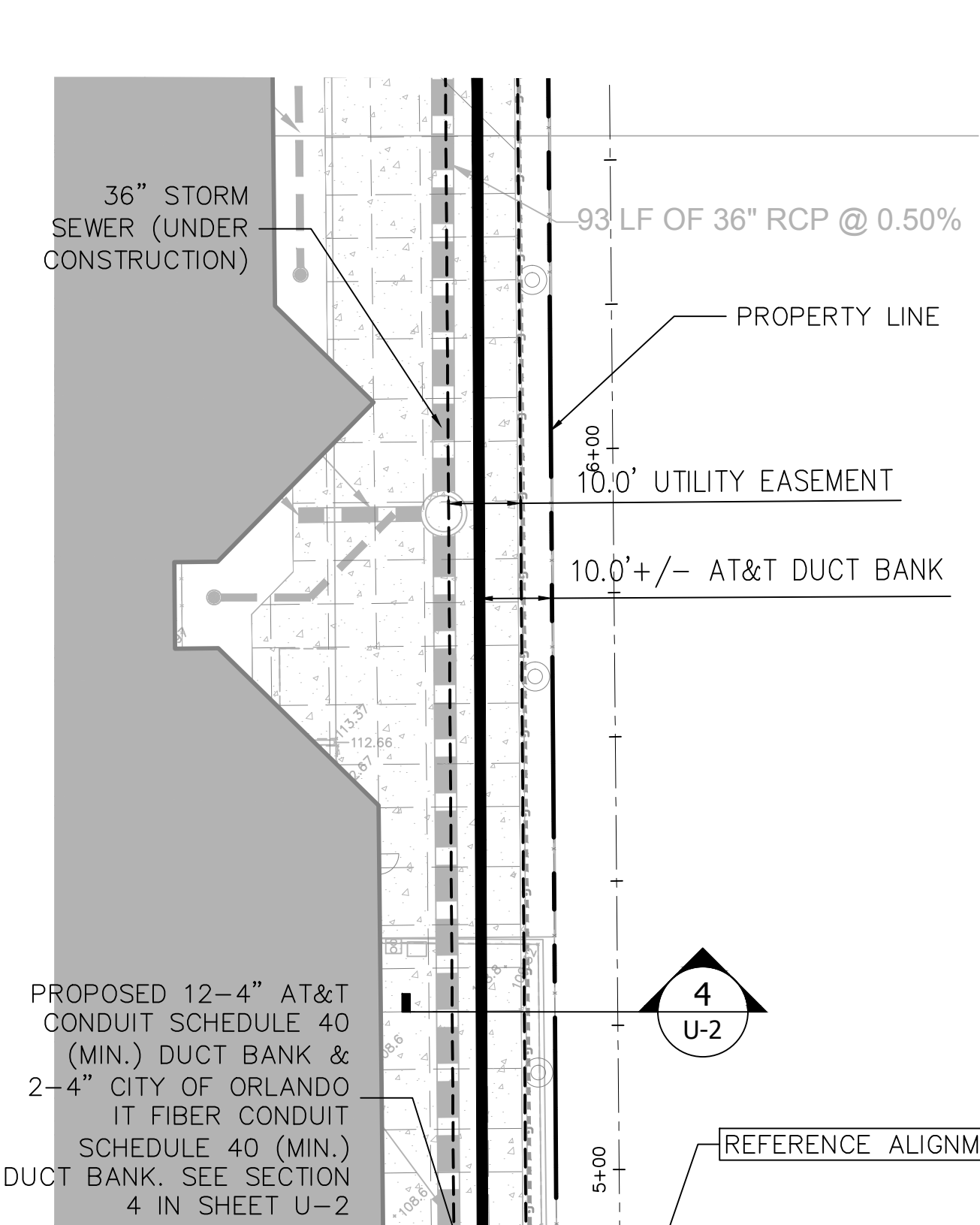
1. C-I-P AT&T Manhole No. 1 Enlargement Detail

1" = 10'



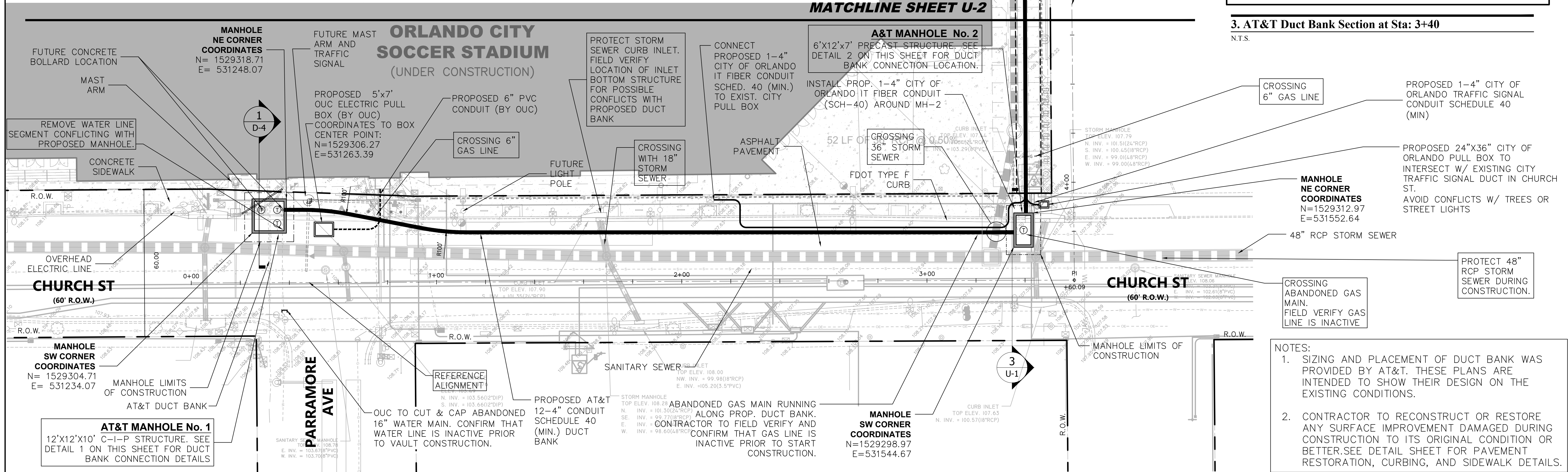
2. Precast AT&T Manhole No. 2 Enlargement Detail

1" = 10'



3. AT&T Duct Bank Section at Sta: 3+40


N.T.S.



- NOTES:
1. SIZING AND PLACEMENT OF DUCT BANK WAS PROVIDED BY AT&T. THESE PLANS ARE INTENDED TO SHOW THEIR DESIGN ON THE EXISTING CONDITIONS.
  2. CONTRACTOR TO RECONSTRUCT OR RESTORE ANY SURFACE IMPROVEMENT DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER. SEE DETAIL SHEET FOR PAVEMENT RESTORATION, CURBING, AND SIDEWALK DETAILS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CITY OF  
ORLANDO  
PUBLIC WORKS

AT&T DUCT BANK  
RELOCATION  
UTILITY PLAN

SHEET  
NO.  
U-1



**ORLANDO CITY SOCCER STADIUM**  
(UNDER CONSTRUCTION)

**MATCHLINE SHEET U-1**

**MATCHLINE SHEET U-3**

PROPOSED 12-4" CONDUIT SCHEDULE 40 (MIN) DUCT BANK & 2-4" CITY OF ORLANDO IT FIBER CONDUIT SCHEDULE 40 (MIN) DUCT BANK. SEE SECTION 4 ON THIS SHEET

36" RCP STORM SEWER (UNDER CONSTRUCTION)

12" PVC @ 0.50%

25' LF OF 15" RCP @ 0.55%

47' LF OF 15" RCP @ 0.55%

70' LF OF 24" RCP @ 0.50%

93' LF OF 36" RCP @ 0.50%

6" GAS LINE

3.82' (TECO GAS)

4.25'

10' (AT&T)

10' PROP. UTILITY EASEMENT

ABANDONED WATER LINE. REMOVE/ADJUST AS NECESSARY. FIELD VERY THAT WATER LINE IS INACTIVE PRIOR TO START CONSTRUCTION.

PROPOSED 2-4" CITY OF ORLANDO IT FIBER CONDUIT SCHEDULE 40 (MIN) DUCT BANK

CROSSING 15" STORM SEWER

REFERENCE ALIGNMENT

CONCRETE SIDEWALK

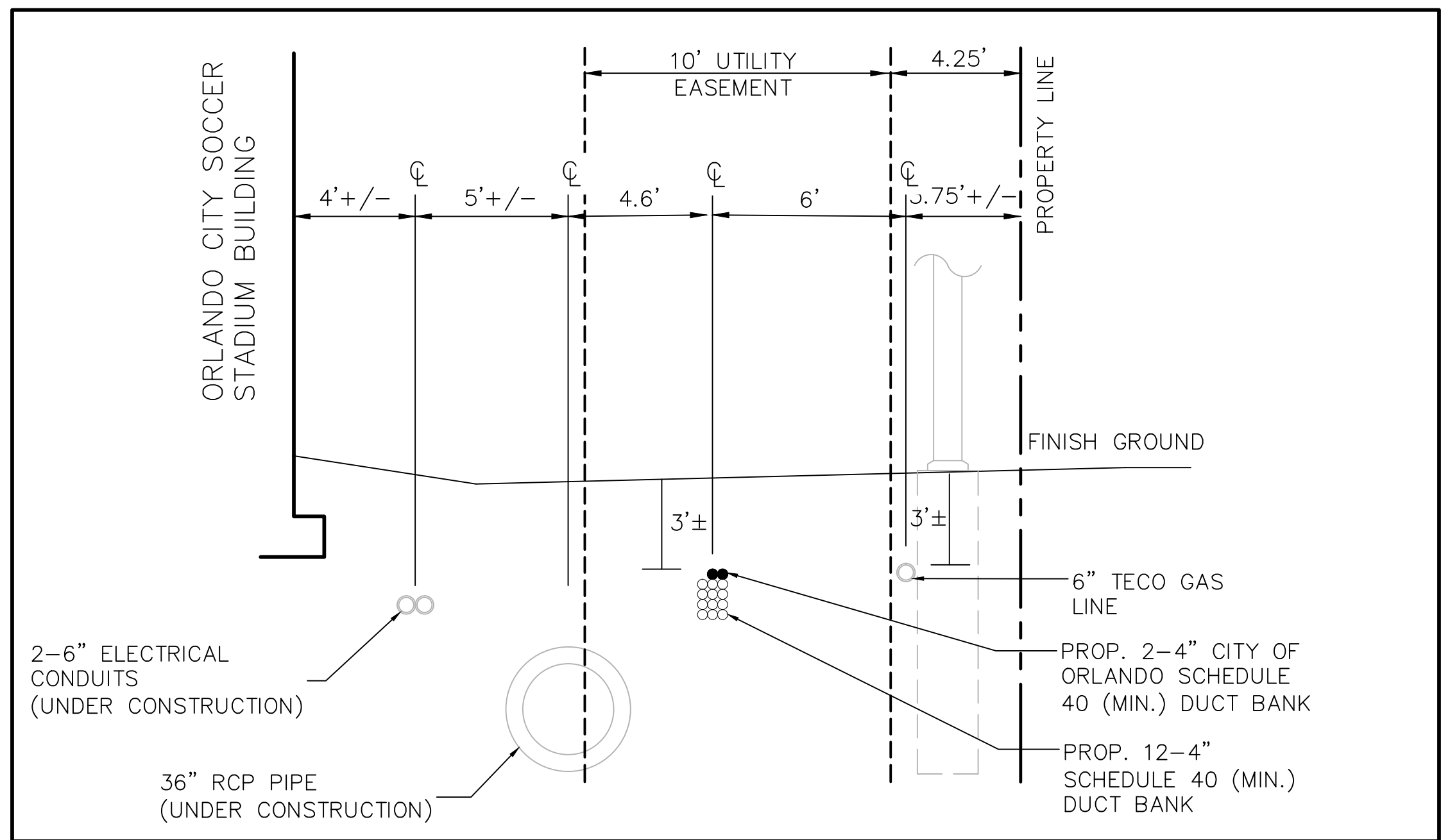
PROPERTY LINE

PROP. UTILITY EASEMENT

5+00 6+00 7+00 8+00 9+00

1  
U-2

100.86 100.85 100.84 100.83 100.82 100.81 100.80 100.79 100.78 100.77 100.76 100.75 100.74 100.73 100.72 100.71 100.70 100.69 100.68 100.67 100.66 100.65 100.64 100.63 100.62 100.61 100.60 100.59 100.58 100.57 100.56 100.55 100.54 100.53 100.52 100.51 100.50 100.49 100.48 100.47 100.46 100.45 100.44 100.43 100.42 100.41 100.40 100.39 100.38 100.37 100.36 100.35 100.34 100.33 100.32 100.31 100.30 100.29 100.28 100.27 100.26 100.25 100.24 100.23 100.22 100.21 100.20 100.19 100.18 100.17 100.16 100.15 100.14 100.13 100.12 100.11 100.10 100.09 100.08 100.07 100.06 100.05 100.04 100.03 100.02 100.01 100.00 99.99 99.98 99.97 99.96 99.95 99.94 99.93 99.92 99.91 99.90 99.89 99.88 99.87 99.86 99.85 99.84 99.83 99.82 99.81 99.80 99.79 99.78 99.77 99.76 99.75 99.74 99.73 99.72 99.71 99.70 99.69 99.68 99.67 99.66 99.65 99.64 99.63 99.62 99.61 99.60 99.59 99.58 99.57 99.56 99.55 99.54 99.53 99.52 99.51 99.50 99.49 99.48 99.47 99.46 99.45 99.44 99.43 99.42 99.41 99.40 99.39 99.38 99.37 99.36 99.35 99.34 99.33 99.32 99.31 99.30 99.29 99.28 99.27 99.26 99.25 99.24 99.23 99.22 99.21 99.20 99.19 99.18 99.17 99.16 99.15 99.14 99.13 99.12 99.11 99.10 99.09 99.08 99.07 99.06 99.05 99.04 99.03 99.02 99.01 99.00 98.99 98.98 98.97 98.96 98.95 98.94 98.93 98.92 98.91 98.90 98.89 98.88 98.87 98.86 98.85 98.84 98.83 98.82 98.81 98.80 98.79 98.78 98.77 98.76 98.75 98.74 98.73 98.72 98.71 98.70 98.69 98.68 98.67 98.66 98.65 98.64 98.63 98.62 98.61 98.60 98.59 98.58 98.57 98.56 98.55 98.54 98.53 98.52 98.51 98.50 98.49 98.48 98.47 98.46 98.45 98.44 98.43 98.42 98.41 98.40 98.39 98.38 98.37 98.36 98.35 98.34 98.33 98.32 98.31 98.30 98.29 98.28 98.27 98.26 98.25 98.24 98.23 98.22 98.21 98.20 98.19 98.18 98.17 98.16 98.15 98.14 98.13 98.12 98.11 98.10 98.09 98.08 98.07 98.06 98.05 98.04 98.03 98.02 98.01 98.00 97.99 97.98 97.97 97.96 97.95 97.94 97.93 97.92 97.91 97.90 97.89 97.88 97.87 97.86 97.85 97.84 97.83 97.82 97.81 97.80 97.79 97.78 97.77 97.76 97.75 97.74 97.73 97.72 97.71 97.70 97.69 97.68 97.67 97.66 97.65 97.64 97.63 97.62 97.61 97.60 97.59 97.58 97.57 97.56 97.55 97.54 97.53 97.52 97.51 97.50 97.49 97.48 97.47 97.46 97.45 97.44 97.43 97.42 97.41 97.40 97.39 97.38 97.37 97.36 97.35 97.34 97.33 97.32 97.31 97.30 97.29 97.28 97.27 97.26 97.25 97.24 97.23 97.22 97.21 97.20 97.19 97.18 97.17 97.16 97.15 97.14 97.13 97.12 97.11 97.10 97.09 97.08 97.07 97.06 97.05 97.04 97.03 97.02 97.01 97.00 96.99 96.98 96.97 96.96 96.95 96.94 96.93 96.92 96.91 96.90 96.89 96.88 96.87 96.86 96.85 96.84 96.83 96.82 96.81 96.80 96.79 96.78 96.77 96.76 96.75 96.74 96.73 96.72 96.71 96.70 96.69 96.68 96.67 96.66 96.65 96.64 96.63 96.62 96.61 96.60 96.59 96.58 96.57 96.56 96.55 96.54 96.53 96.52 96.51 96.50 96.49 96.48 96.47 96.46 96.45 96.44 96.43 96.42 96.41 96.40 96.39 96.38 96.37 96.36 96.35 96.34 96.33 96.32 96.31 96.30 96.29 96.28 96.27 96.26 96.25 96.24 96.23 96.22 96.21 96.20 96.19 96.18 96.17 96.16 96.15 96.14 96.13 96.12 96.11 96.10 96.09 96.08 96.07 96.06 96.05 96.04 96.03 96.02 96.01 96.00 95.99 95.98 95.97 95.96 95.95 95.94 95.93 95.92 95.91 95.90 95.89 95.88 95.87 95.86 95.85 95.84 95.83 95.82 95.81 95.80 95.79 95.78 95.77 95.76 95.75 95.74 95.73 95.72 95.71 95.70 95.69 95.68 95.67 95.66 95.65 95.64 95.63 95.62 95.61 95.60 95.59 95.58 95.57 95.56 95.55 95.54 95.53 95.52 95.51 95.50 95.49 95.48 95.47 95.46 95.45 95.44 95.43 95.42 95.41 95.40 95.39 95.38 95.37 95.36 95.35 95.34 95.33 95.32 95.31 95.30 95.29 95.28 95.27 95.26 95.25 95.24 95.23 95.22 95.21 95.20 95.19 95.18 95.1



N.T.S.

- NOTES:
1. SIZING AND PLACEMENT OF DUCT BANK WAS PROVIDED BY AT&T. THESE PLANS ARE INTENDED TO SHOW THEIR DESIGN ON THE EXISTING CONDITIONS.
  2. CONTRACTOR TO RECONSTRUCT OR RESTORE ANY SURFACE IMPROVEMENT DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.SEE DETAIL SHEET FOR PAVEMENT RESTORATION, CURBING, AND SIDEWALK DETAILS.



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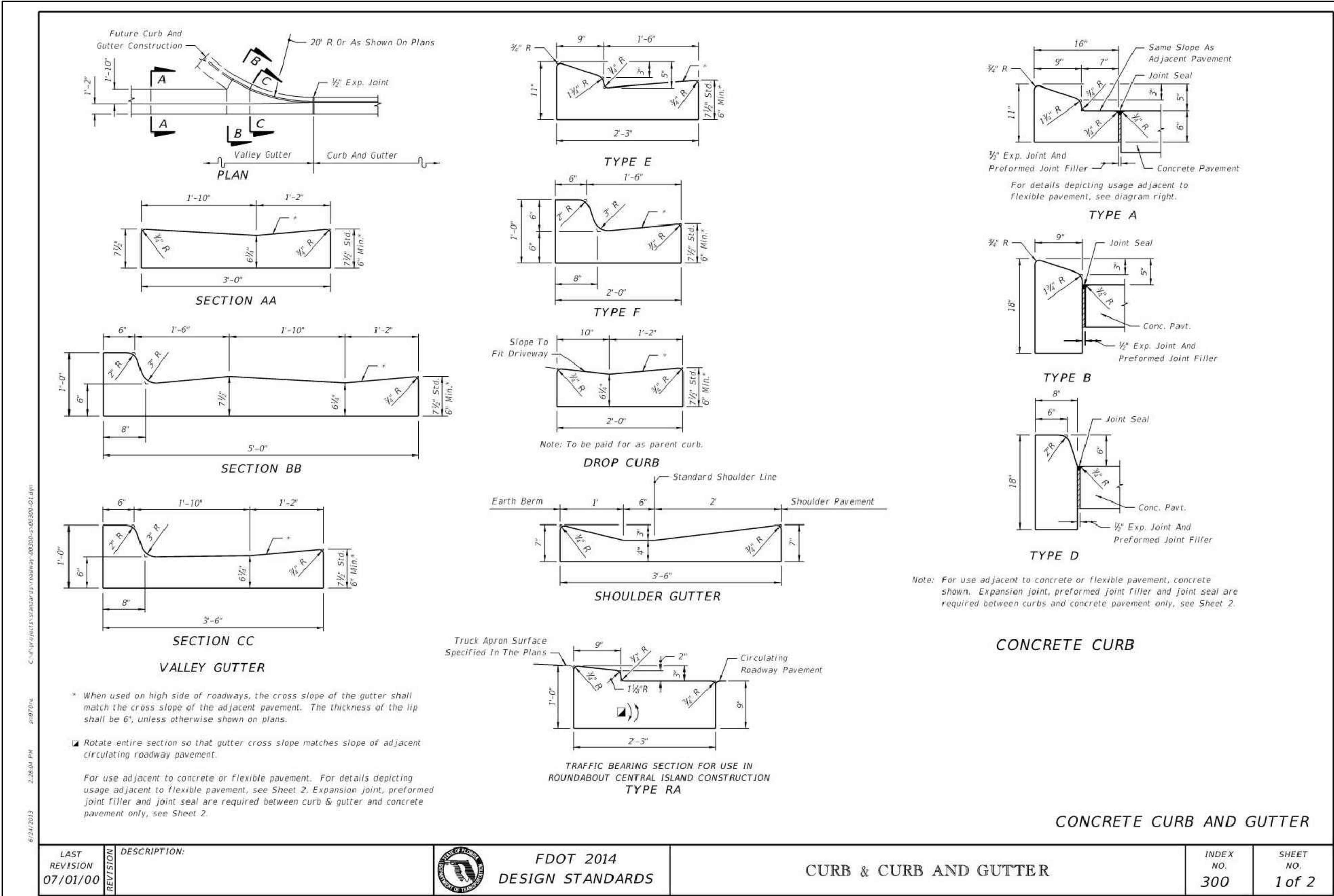


SHEET NO.
U-2









1. FDOT Index 300 - Curb & Curb and Gutter Detail

N.T.S.

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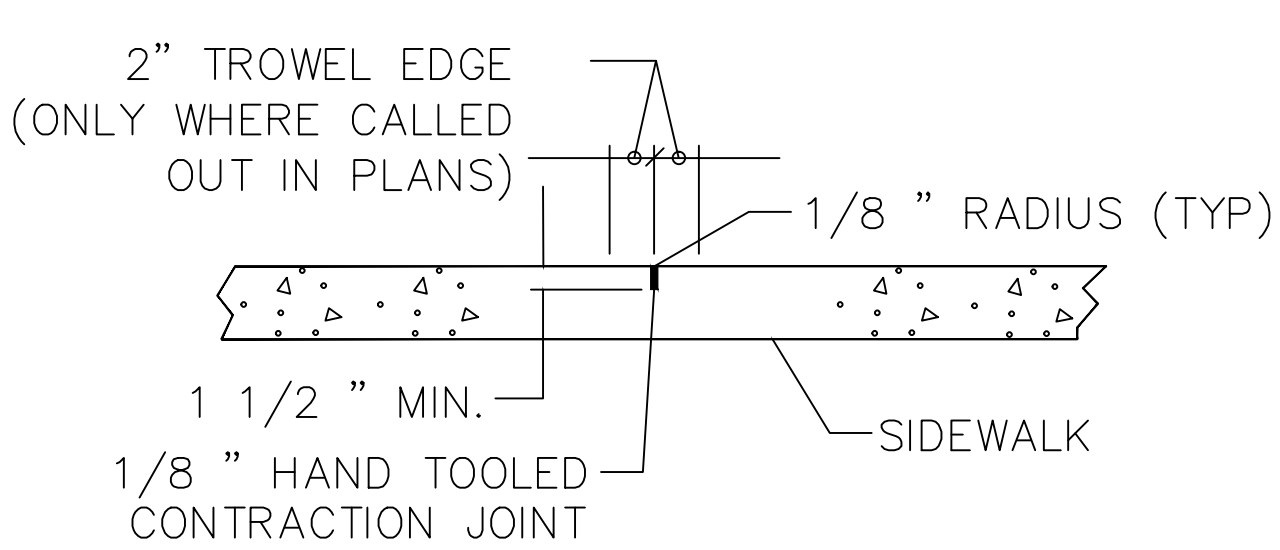
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GENERAL DETAILS

SHEET  
NO.

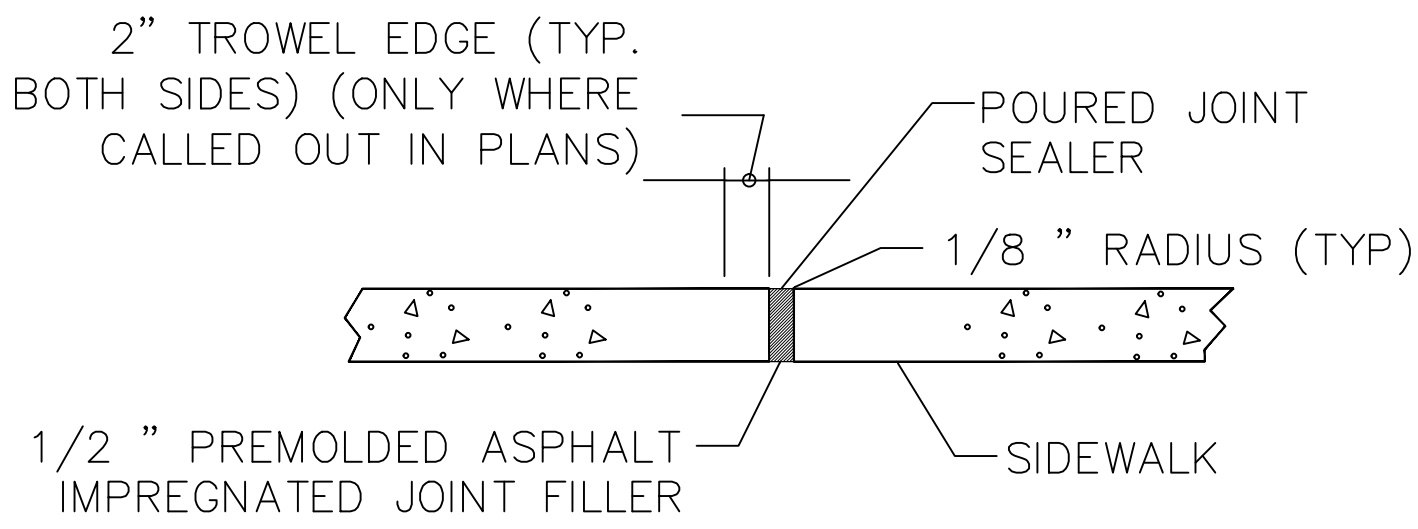
D-1





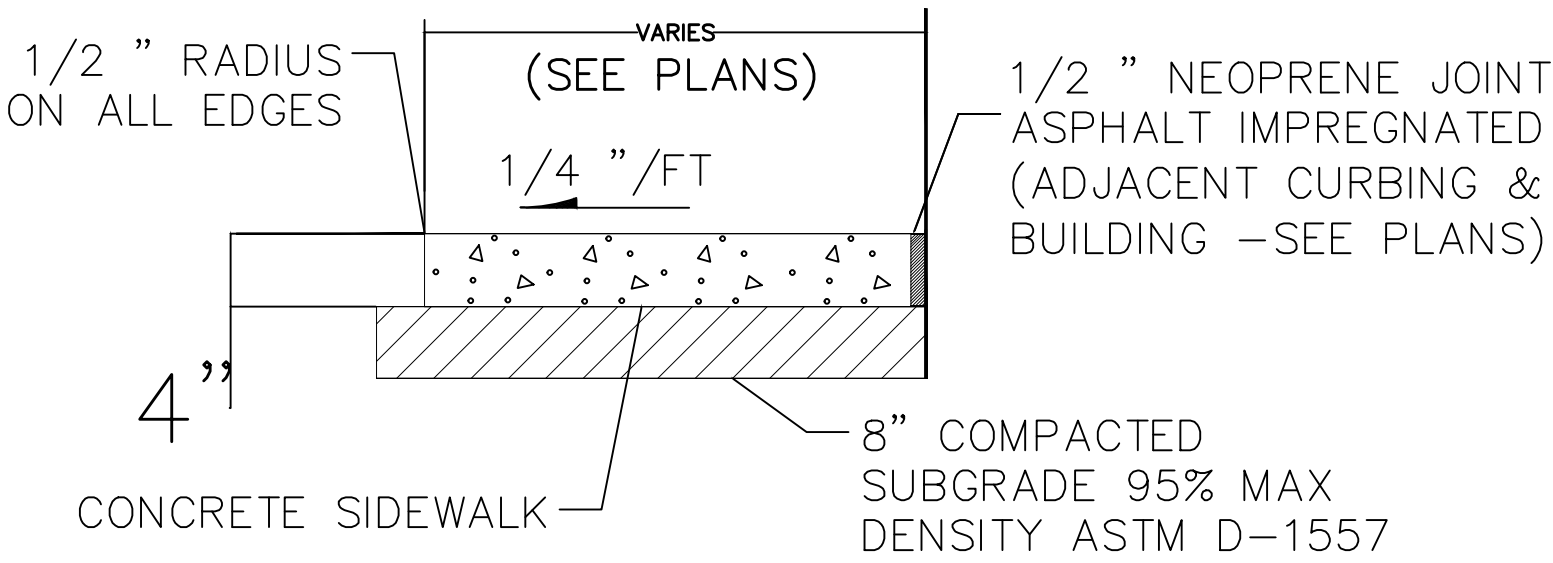
NOTE: CONTRACTION JOINTS TO BE SPACED AT A WIDTH OF WALKWAY OR A MAX. OF 10'.

CONTRACTION JOINTS



NOTE: EXPANSION JOINTS TO BE SPACED AT A MAX. OF 30'.

EXPANSION JOINTS

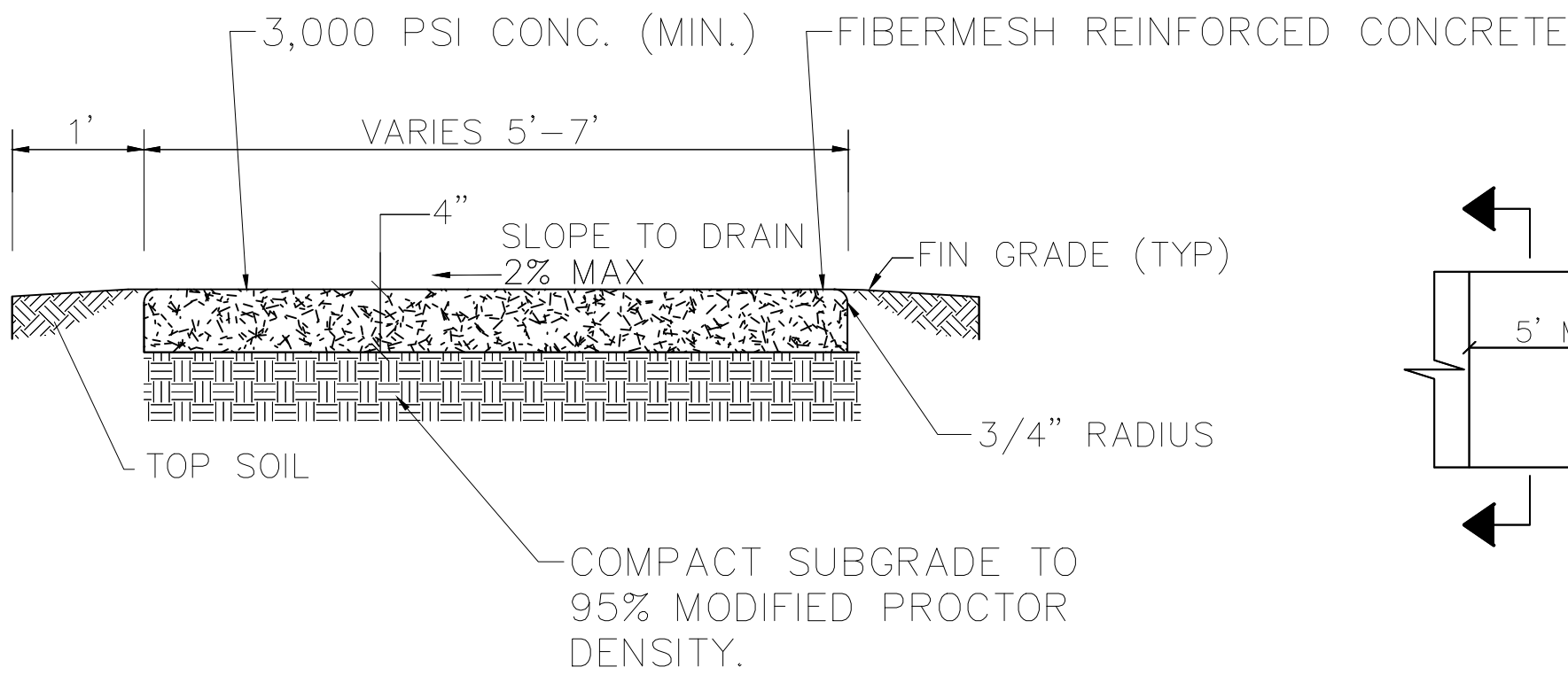


NOTE: TO BE CONSTRUCTED PER FDOT INDEX 310

SIDEWALK

1. Sidewalk Details

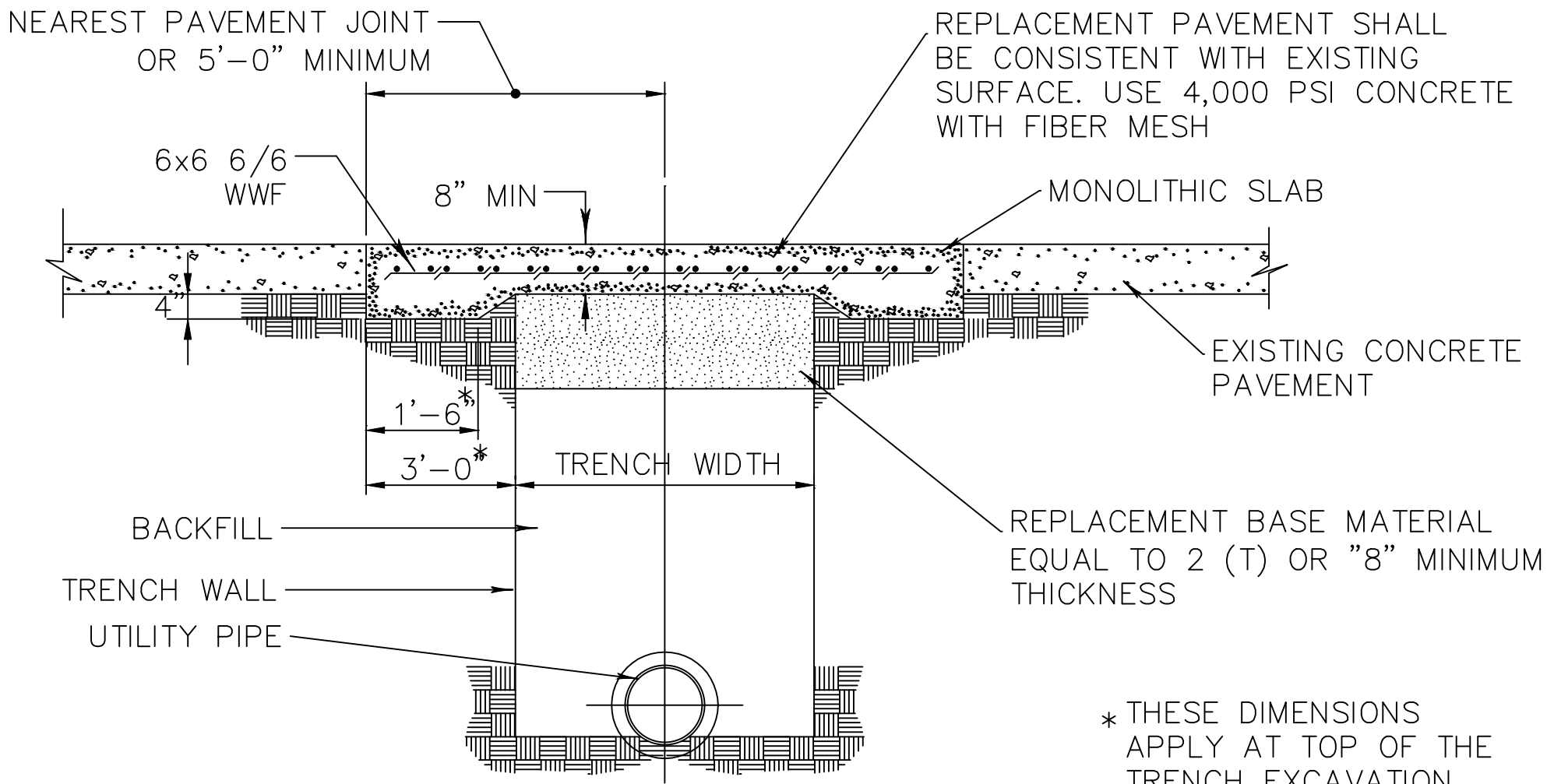
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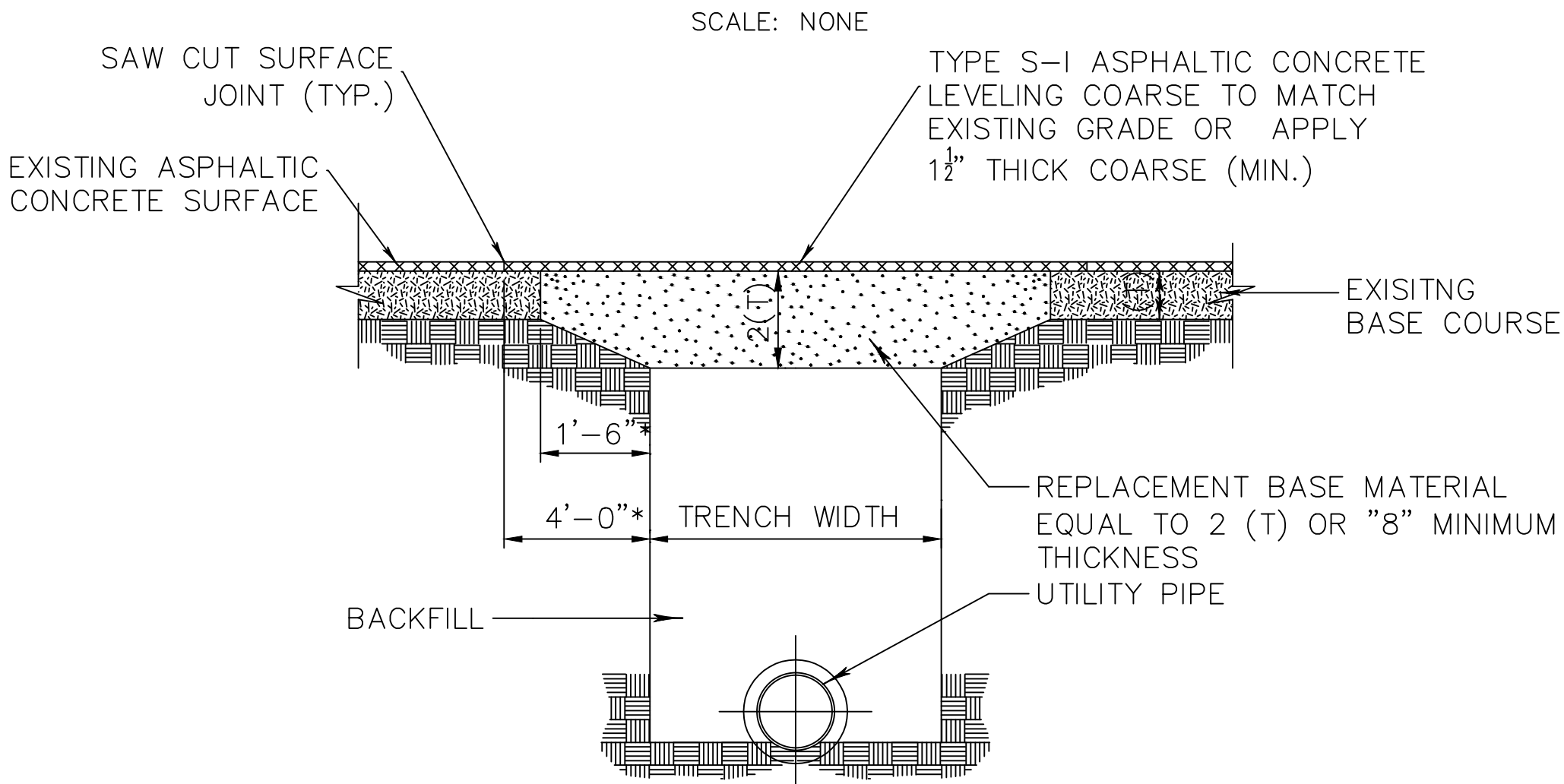
NOTE: PLACE SAWCUTS AND/OR CONSTRUCTION JOINTS AT 4'-5' O.C.  
GOLF CART PATH WIDTH VARIES FROM 8'-12'

2. Concrete Sidewalk Typical Cross Section

N.T.S.



\* THESE DIMENSIONS APPLY AT TOP OF THE TRENCH EXCAVATION. TRENCH WIDTH VARIES WITH PIPE SIZE.



1. PUBLIC ROADS AND PAVED DRIVE CROSSINGS SHALL BE BACK-FILLED WITH GRANULAR MATERIAL AND TOPPED WITH 12" THICK OF LIME ROCK BASE COURSE MATERIAL. BACKFILL SHALL BE COMPACTED TO MIN 98% MODIFIED PROCTOR OF THE MINIMUM DRY DENSITY PER AASHTO T-801, OR ASTM D1557. REFER TO RW-12 FOR TYPE A BEDDING AND RW-13 FOR TYPE B BEDDING.
2. TRENCH WALLS SHALL BE SHEETED IN AREAS WHERE SIDE SLOPES WOULD INTERFERE WITH EXISTING UTILITIES IMPROVEMENTS, OR EXTEND BEYOND THE EASEMENT OR RIGHT-OF-WAY LIMITS.
3. EXCAVATION AND SHEETING AND BRACING SHALL COMPLY WITH THE TRENCH SAFETY ACT, AS AMENDED, (90-96 OF THE FLORIDA STATUTES) AND THE LATEST EDITION OF THE FDOT CONSTRUCTION MANUAL.
4. PAVEMENT AREAS SHALL BE RESTORED AND SHALL MATCH EXISTING GRADE. THE ENTIRE ROADWAY SECTION SHALL BE RESURFACED IF THE LONGITUDINAL CUT EXCEEDS 50% OF THE WIDTH OF THE ROADWAY.



DATE PRINTED: 8-10-04

3. Trenching in Paved Area Detail

N.T.S.

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NO.

D-2



TABLE D

C PLASTIC PVC AND C POLYPROPYLENE  
CONDUIT  
ENCASED BNEDS, SWEEPS, AND GRADE  
CHANGES  
1-INCH VERTICAL AND HORIZONTAL SEPARATION

TRENCH DIMENSIONS

DUCT FORMATION		TRENCH WIDTH (NOTE 1) (INCHES)	CONCRETE DEPTH (NOTE 2) (INCHES)	APPROX. CU YDS CONCRETE PER 100 TRENCH FEET
NO. WIDE	NO. HIGH			
3	2	18 – 1/2	13 – 1/2	4 – 1/4
3	3	18 – 1/2	19	5 – 1/2
3	4	18 – 1/2	24 – 1/2	7
4	2	23 – 1/2	13 – 1/2	5 – 1/2
4	3	23 – 1/2	19	7 – 1/4
4	4	23 – 1/2	24 – 1/2	9

NOTE 1: INCLUDES 1–1/2 INCHES FROM EACH  
SIDE OF DUCT FORMATION TO TRENCH  
WALL AND 1 INCH BETWEEN DUCTS.

NOTE 2: INCLUDES 1–1/2 INCHES BELOW  
BOTTOM TIER, 2 INCHES ABOVE TOP  
TIER, AND 1 INCH BETWEEN DUCTS.

READ: FOR FORMATIONS NOT LISTED IN TABLE  
D, THE APPROXIMATE CUBIC YARDS OF  
CONCRETE REQUIRED PER 100 TRENCH  
FEET CAN BE OBTAINED WITH THE  
FOLLOWING FORMULA:

FORMULA:  $V = (13.8WH + 10.7H = 13.4W = 4) 0.026$

V = VOLUME OF CONCRETE (CUBIT  
YARDS/100 TRENCH FEET)

W = NUMBER OF DUCTS WIDE

H = NUMBER OF DUCTS HIGH

EXAMPLE: DUCT FORMATION 5 WIDE BY 10 HIGH

$(13.8 \times 5 \times 10) = (10.7 \times 10) = (13.4 \times 5) = 4) 0.026$

$(690 + 107 + 67 + 4) 0.026$

$(868 \times 0.026) = 22.6$  CUBIC YARDS PER 100  
TRENCH FEET.

LAYOUT CONDUIT

READ: AT THE TRENCH SITE, EXAMINE EACH  
CONDUIT LENGTH AND REMOVE ALL MUD  
AND OTHER DEBRIS SUCH AS LATH,  
PAPER, STONES, ETC., FROM THE DUCTS  
BEFORE PLACING THEM IN THE TRENCH.

PLACE AND JOIN THE DUCT SECTIONS IN THE  
TRENCH, EXCEPT WITH THE  
“ABOVE–THE–TRENCH” METHOD OF PLACING  
BUNDLED CONDUIT. LENGTHS SHORTER THAN 5  
FEET SHOULD NOT BE USED AT MANHOLES OR  
THE CABLE ENTRANCE FACILITY.

READ: USE ONLY CEMENT SUITABLE FOR THE  
KIND OF DUCT MATERIAL BEING USED;  
CEMENT CONTAINERS FOR USE WITH PVC  
SHOULD BE MARKED, EXCLUSIVELY FOR  
USE WITH PVC. USE ONLY THE  
ADHESIVE SUPPLIED WITH B  
POLYPROPYLENE CONDUIT ON  
POLYPROPYLENE CONDUIT. SOLVENT  
CEMENT WHICH IS SHIPPED WITH PVC  
CONDUIT MUST NOT BE USED WITH  
POLYPROPYLENE CONDUIT.

JOIN THE CONDUIT AS FOLLOWS

- (1) WIPE ANY MUD OR DIRT FROM THE END  
OF THE DUCT AND FROM THE INSIDE OF  
THE COUPLING OR BELL.
- (2) APPLY CEMENT TO THE SPIGOT END OF  
THE DUCT WITH A NATURAL BRISTLE  
BRUSH UP TO THE INSERTION DEPTH LINE.
- (3) POLYPROPYLENE CONDUIT HAS BEEN  
DESIGNED WITH AN INTERFERENCE FIT  
BELL AND SPIGOT JOINT. IF THE SPIGOT  
DOES NOT SEAT IN THE BELL TO THE  
INSERTION LINE, DRIVE THE CONDUIT HOME  
USING A MALLET AND A WOODEN BLOCK  
AS A BUFFER.

NOTE: IF PVC CEMENT SEIZES BEFORE THE  
SPIGOT END IS FULLY SEATED, USE A  
HANDSAW TO CUT OUT THE DEFECTIVE  
JOINT. IF POLYPROPYLENE ADHESIVE  
DRIES ON THE SPIGOT END BEFORE THE  
JOINT IS MADE, RECOAT THE SPIGOT  
END AND INSERT INTO BELL TO  
COMPLETE JOINT.

THE PVC CEMENT AND POLYPROPYLENE  
ADHESIVE SHOULD EACH HAVE ABOUT THE  
SAME CONSISTENCY AS OIL BASE HOUSE PAINT.  
IF IT BECOMES TOO THICK, DISCARD AND OPEN  
A NEW CAN. WHEN USING POLYPROPYLENE  
CONDUIT AND IF IMMEDIATE JOINT STRENGTH IS  
REQUIRED (EXAMPLE, AT FIELD BENDS AND  
MANHOLE TERMINATORS), APPLY A THIN  
COATING OF ADHESIVE TO THE INSIDE OF THE  
MATING BELL (OR TERMINATOR). ALLOW A  
MINIMUM OF 5 MINUTES FOR ADHESIVE TO DRY  
BEFORE COMPLETING THE JOINT FOLLOWING  
STEPS (2) AND (3).

AT THE MANHOLE OR CABLE ENTRANCE  
FACILITY

SEPARATE THE DUCTS VERTICALLY AND  
HORIZONTALLY BY A MINIMUM OF 2 INCHES.  
SEPARATION BETWEEN DUCTS CAN BE OBTAINED  
WITH PREFORMED PLASTIC SPACERS. DO NOT  
USE WOOD FOR SPACERS. JOIN THE CONDUIT  
TO DUCT TERMINATORS IN THE WALL USING THE  
CEMENT (OR ADHESIVE) SUPPLIED WITH THE  
CONDUIT. IF CONDUIT IS TO BE CAST INTO THE  
MANHOLE (CEF) WALL, ATTACH THE DUCT  
TERMINATORS TO THE TERMINATION END OF THE  
CONDUIT PRIOR TO ENCASEMENT IN THE WALL.  
PLACE WOODEN BULKHEADS IN FRONT OF THE  
DUCTS INSIDE THE MANHOLE TO PREVENT THE  
FLOW OF CONCRETE INTO THE MANHOLE, AND  
POUR CONCRETE (2500 PSI, 3/8-INCH  
AGGREGATE, 9-INCH SLUMP) AROUND THE  
DUCTS OUTSIDE THE MANHOLE. TO PREVENT  
THE CONCRETE FROM FLOWING ALONG THE  
TRENCH, EITHER BACKFILL OR PLACE A WOODEN  
FORM 12 TO 18 INCHES FROM THE MANHOLE  
END WALL. POUR THE CONCRETE TO A  
MINIMUM DEPTH OF 2 INCHES ABOVE THE DUCT  
ENTRANCE.

READ: BEFORE POURING CONCRETE AT THE  
DUCT ENTRANCE, REMOVE ALL DIRT,  
MUD, ETC., FROM THE AREA OF THE  
END WALL WHERE THE CONCRETE WILL  
CONTACT THE WALL. TO PREVENT  
CONCRETE FROM ENTERING THE DUCTS,  
SEAL EACH DUCT WITH A CONDUIT  
PLUG.

STRAIGHT SECTIONS

- 5.5 AS THE DUCTS ARE LAID, DO NOT  
FOLLOW MINOR DEVIATIONS IN TRENCH  
ALIGNMENT TO MAINTAIN SIDE  
CLEARANCE. LAY THE DUCTS AS  
STRAIGHT AS POSSIBLE, EVEN THOUGH  
IT MAY REDUCE SIDE CLEARANCE FOR  
SHORT DISTANCES. THIS IS IMPORTANT  
TO ENSURE AGAINST EXCESSIVE PULLING  
LOADS WHEN PLACING CABLE.
- 5.6 FORMATIONS UP TO FOUR DUCTS HIGH  
MAY BE CONSTRUCTED BY STACKING  
THE DUCTS ONE UPON THE OTHER WITH  
NO VERTICAL SEPARATION BUT WITH A  
SEPARATION OF 2 INCHES BETWEEN  
VERTICAL COLUMNS. A SECOND  
FORMATION FOUR DUCTS HIGH MAY BE  
PLACED ABOVE THE FIRST IF SEPARATED  
BY 2 INCHES OF FIRMLY COMPACTED  
SELECT, GRANULAR BACKFILL.

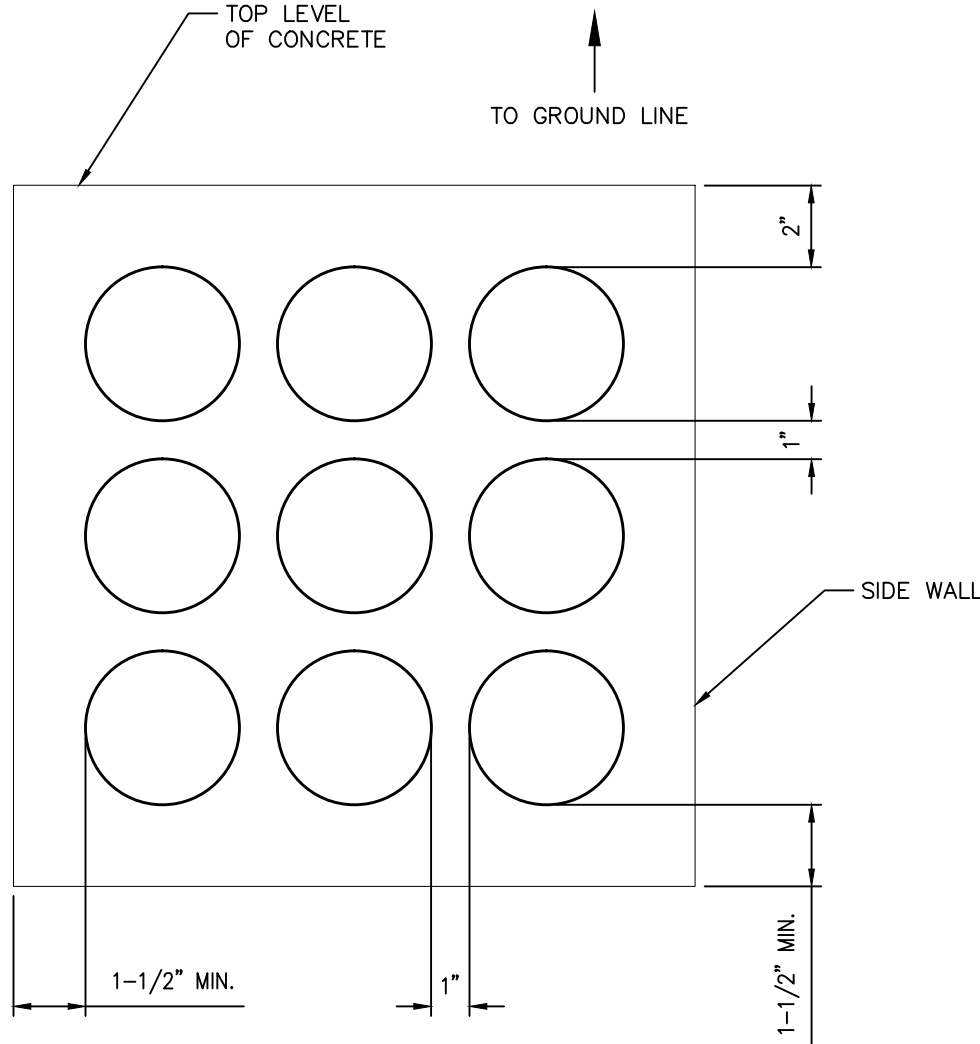
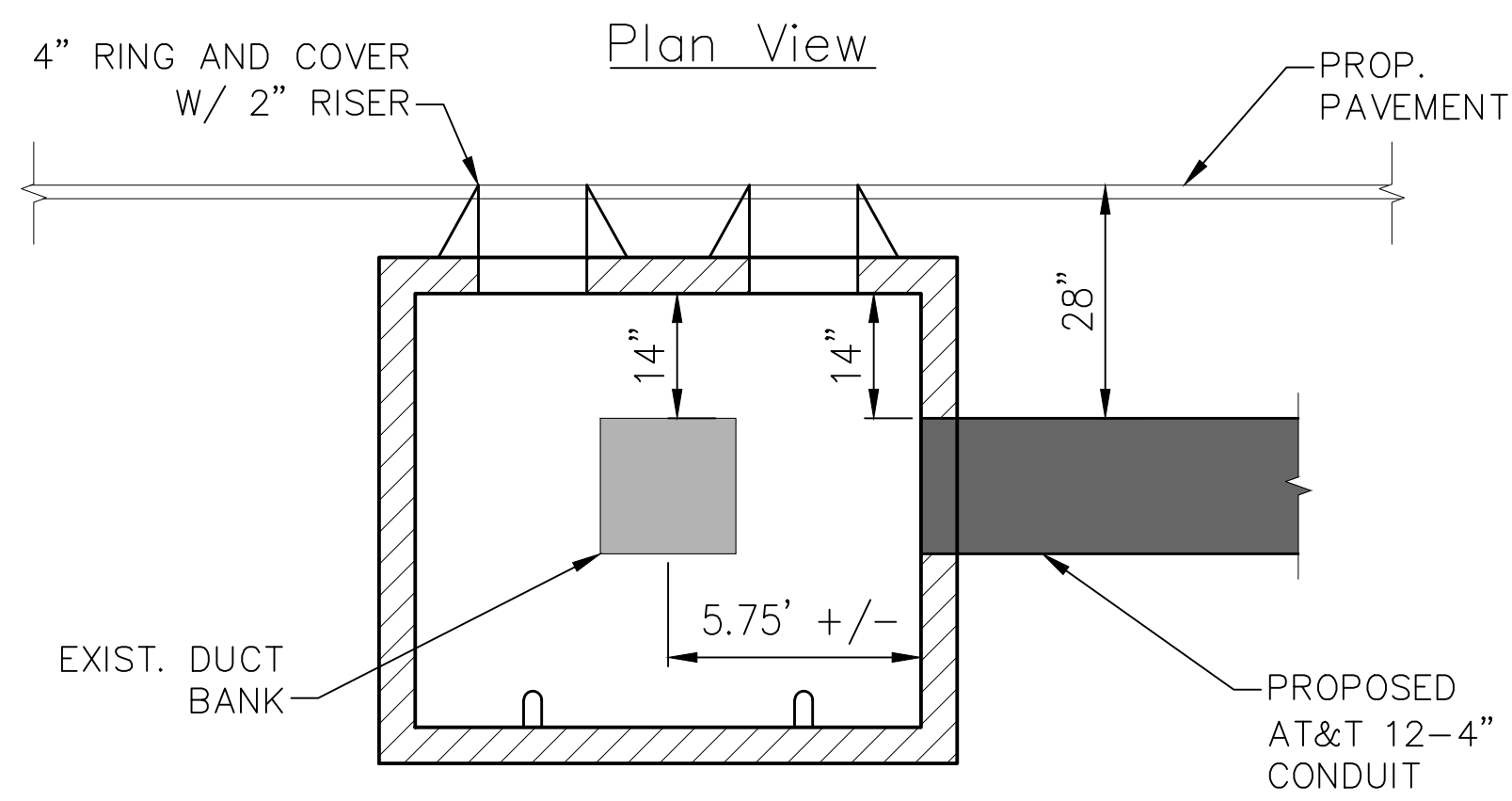
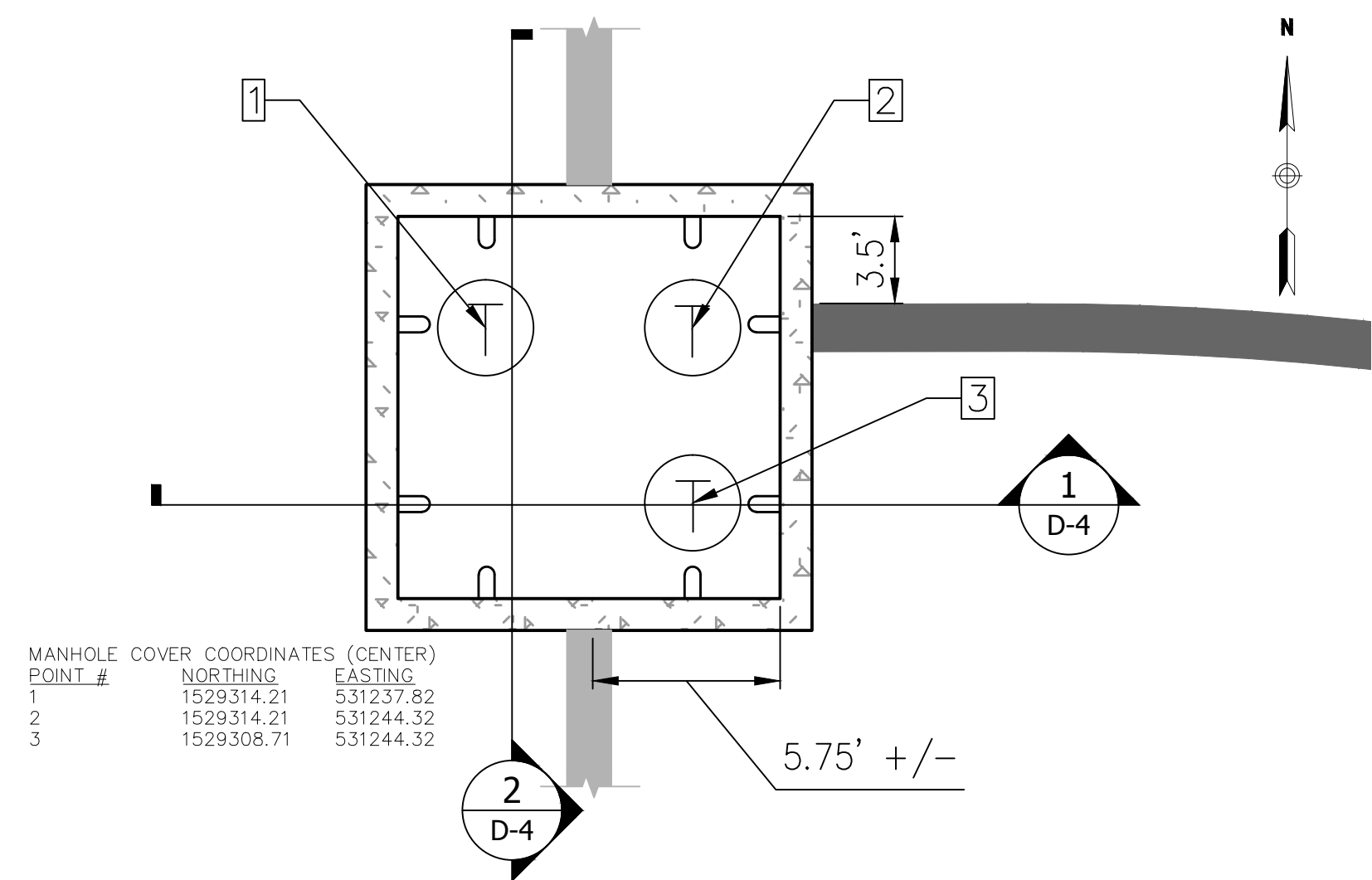


FIG. 4 – SEPARATION FOR ENCASED BENDS,  
SWEEPS, AND GRADE CHANGES

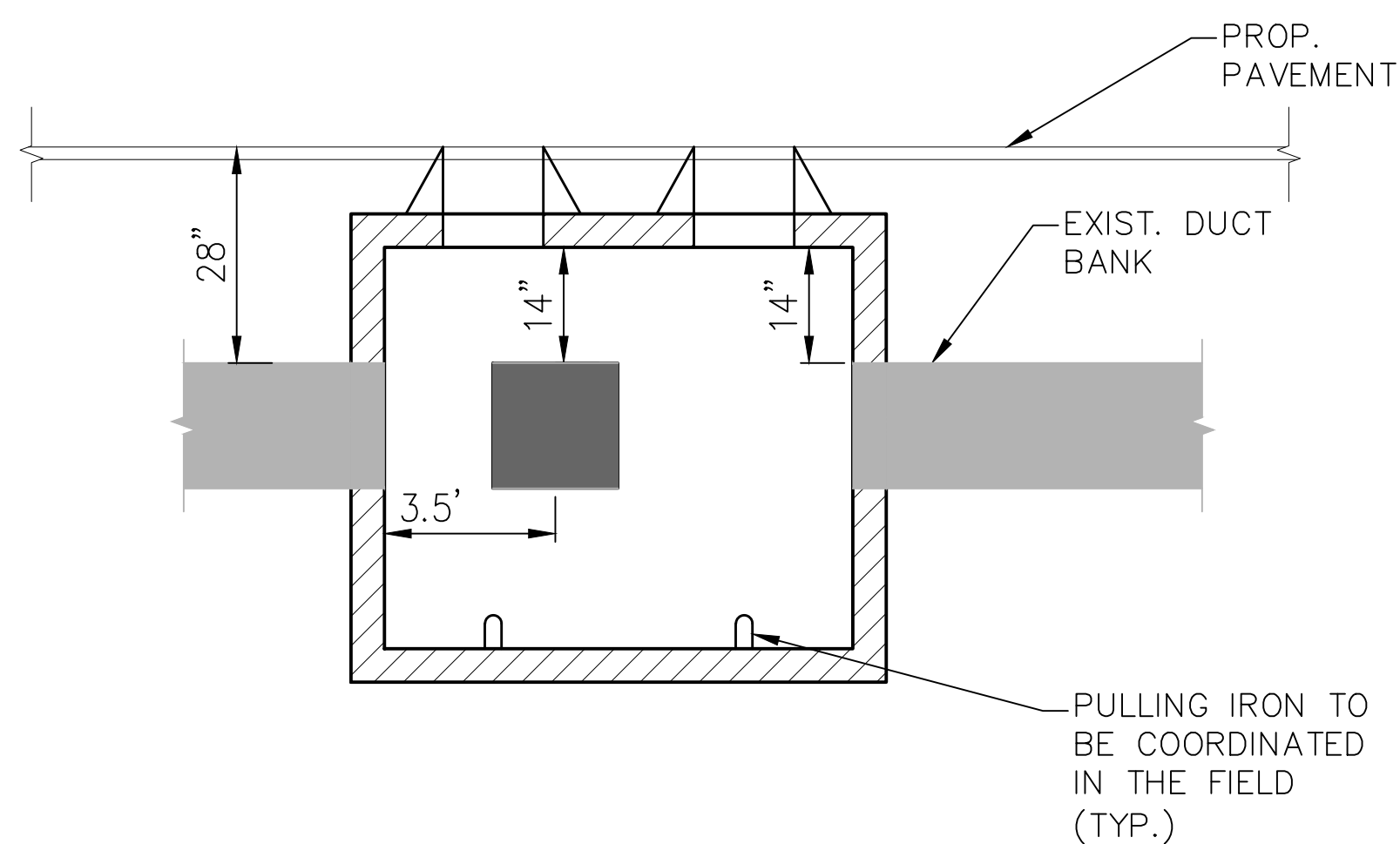
1. Concrete Encasement Construction Specifications - AT&T

N.T.S.





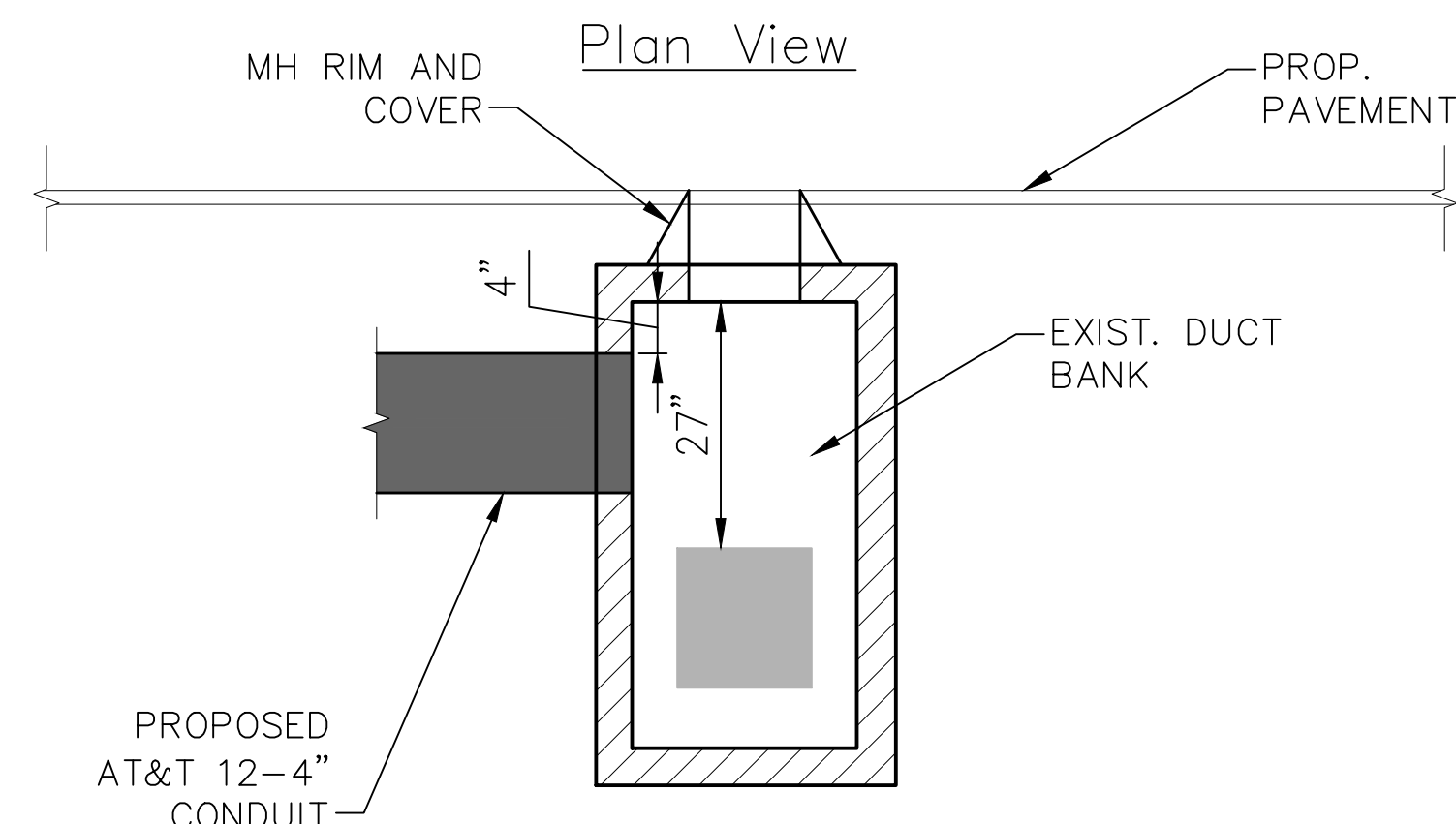
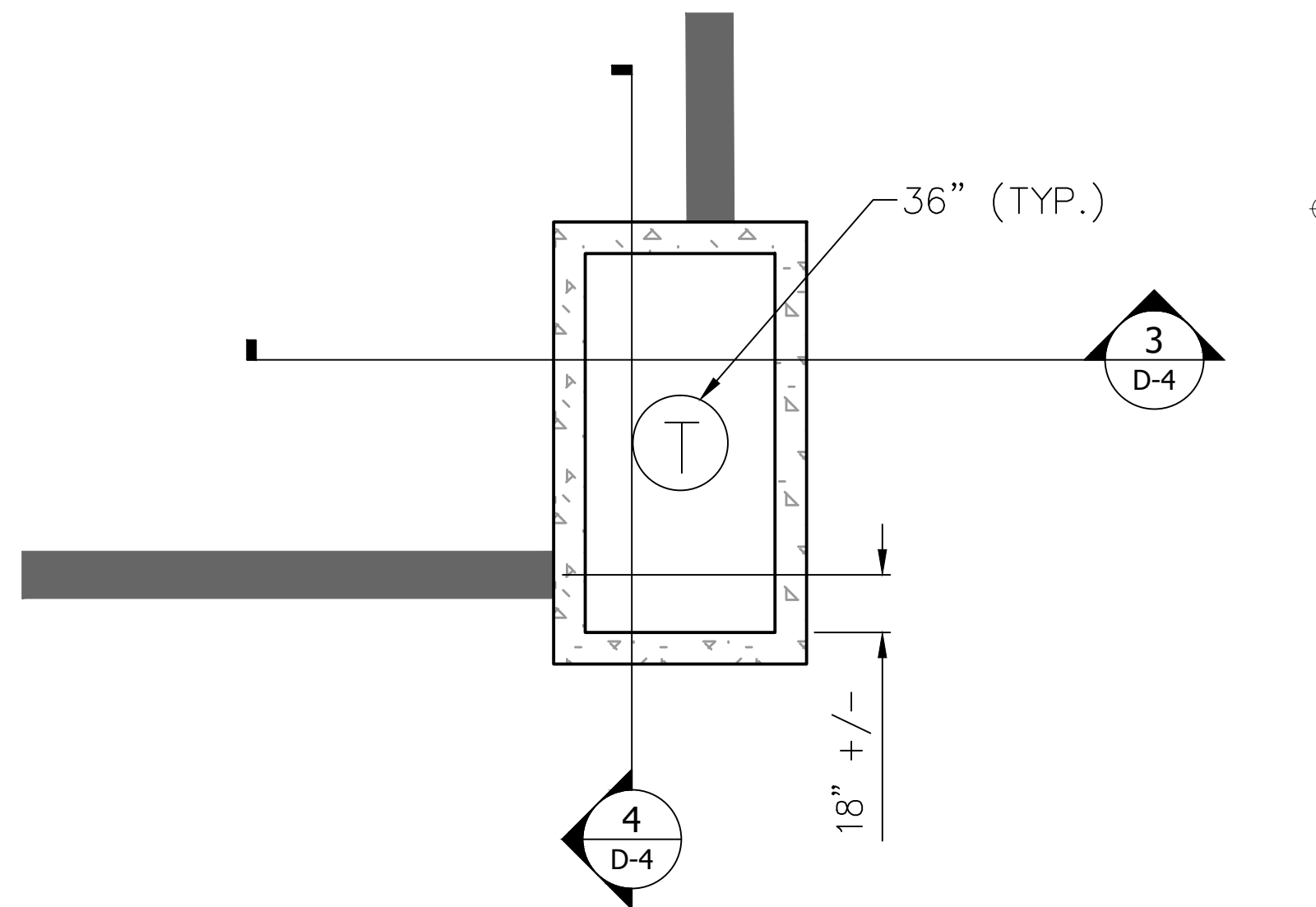
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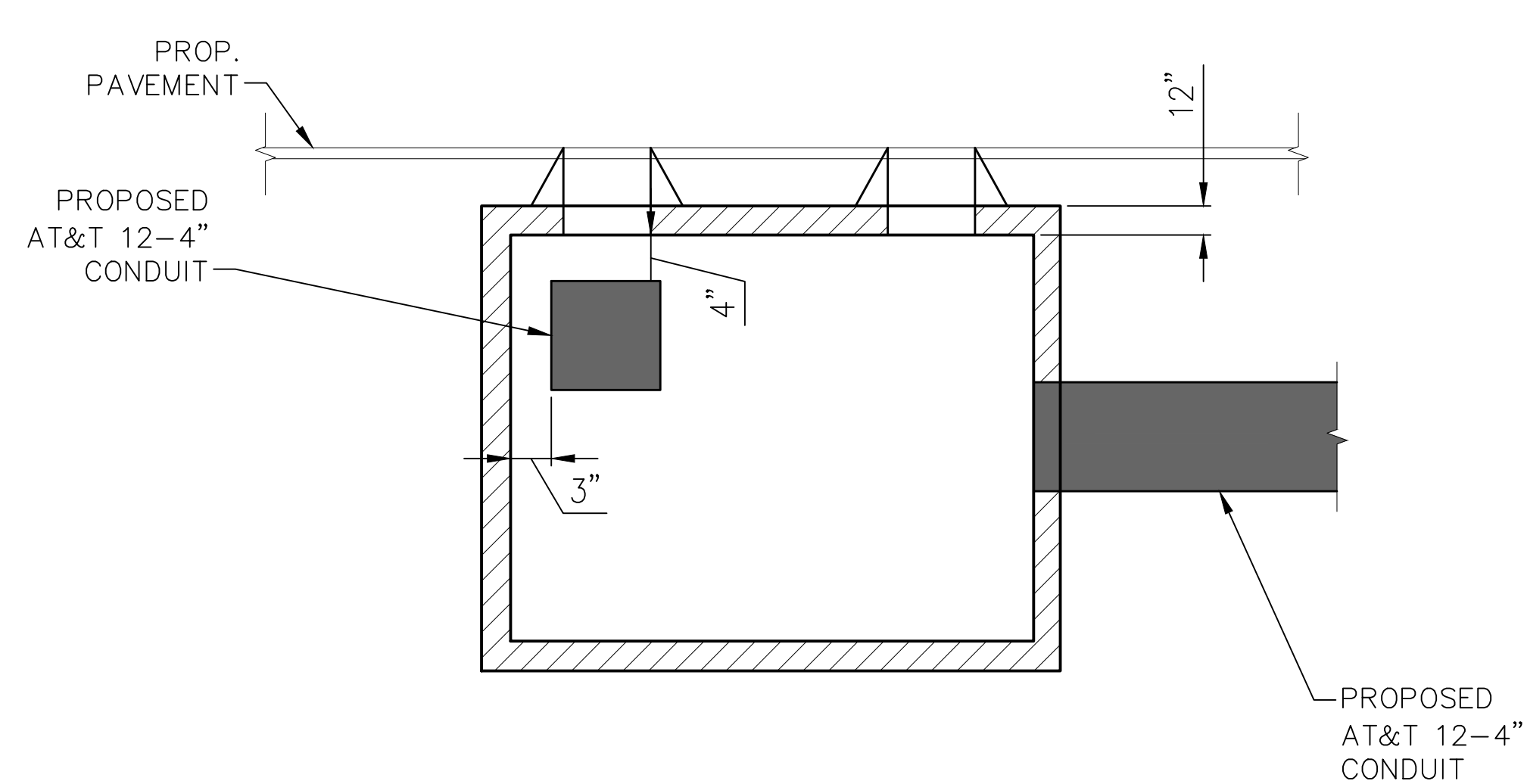
Section 2

1. C-I-P AT&T Manhole No. 1 Detail

N.T.S.



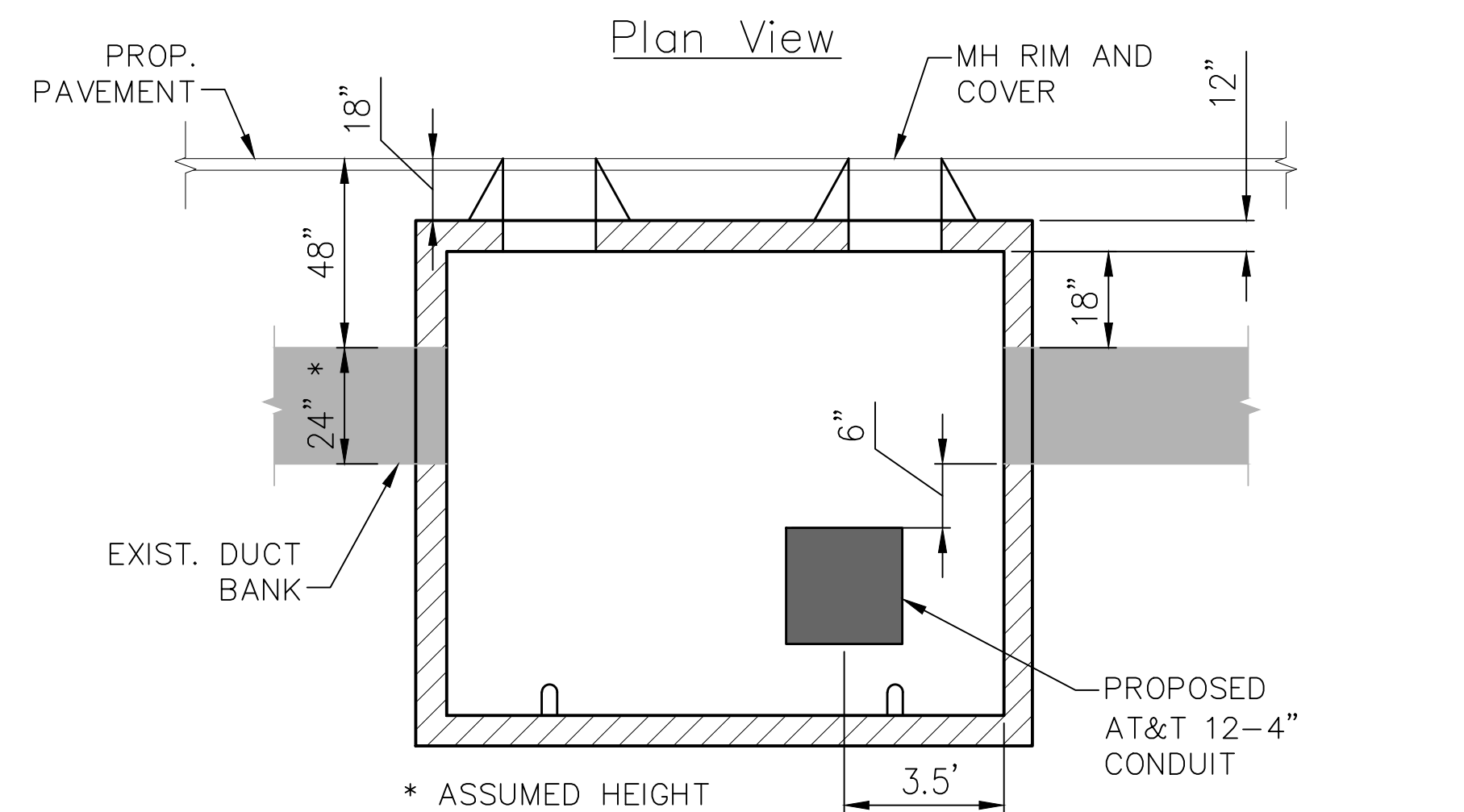
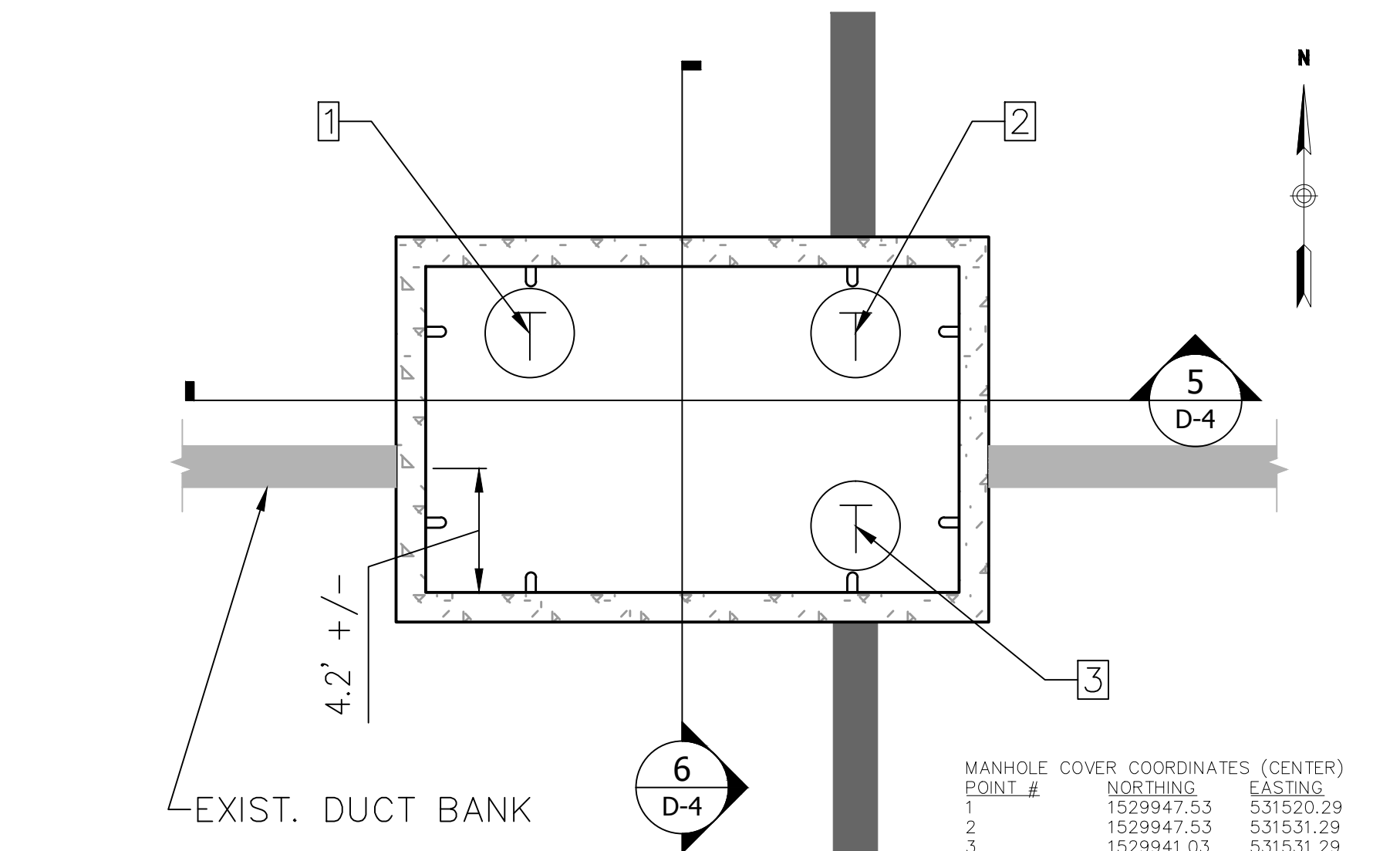
Section 3



Section 4

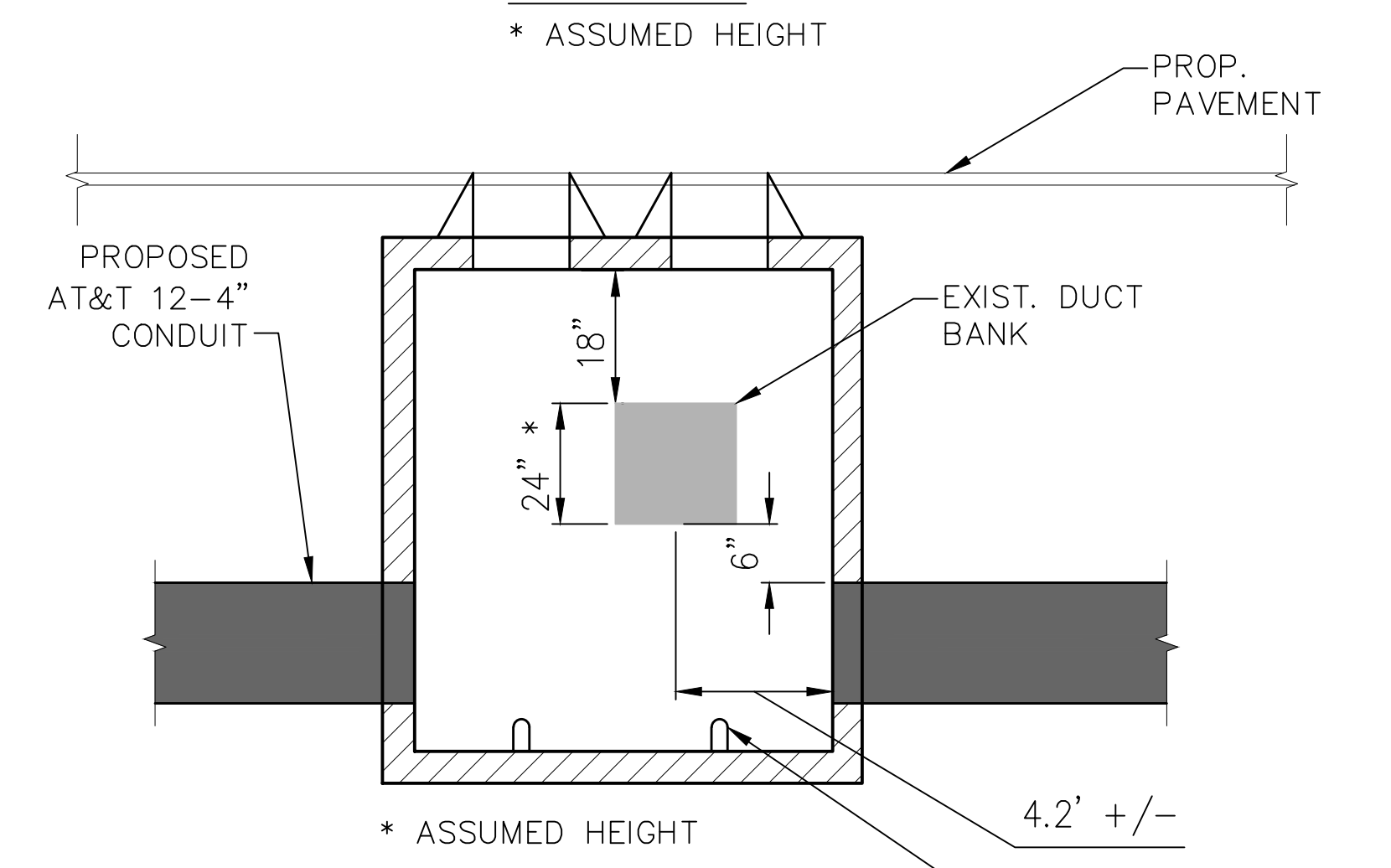
2. Precast AT&T Manhole No. 2 Detail

N.T.S.



Section 5

\* ASSUMED HEIGHT



Section 6

3. C-I-P AT&T Manhole No. 3 Detail

N.T.S.

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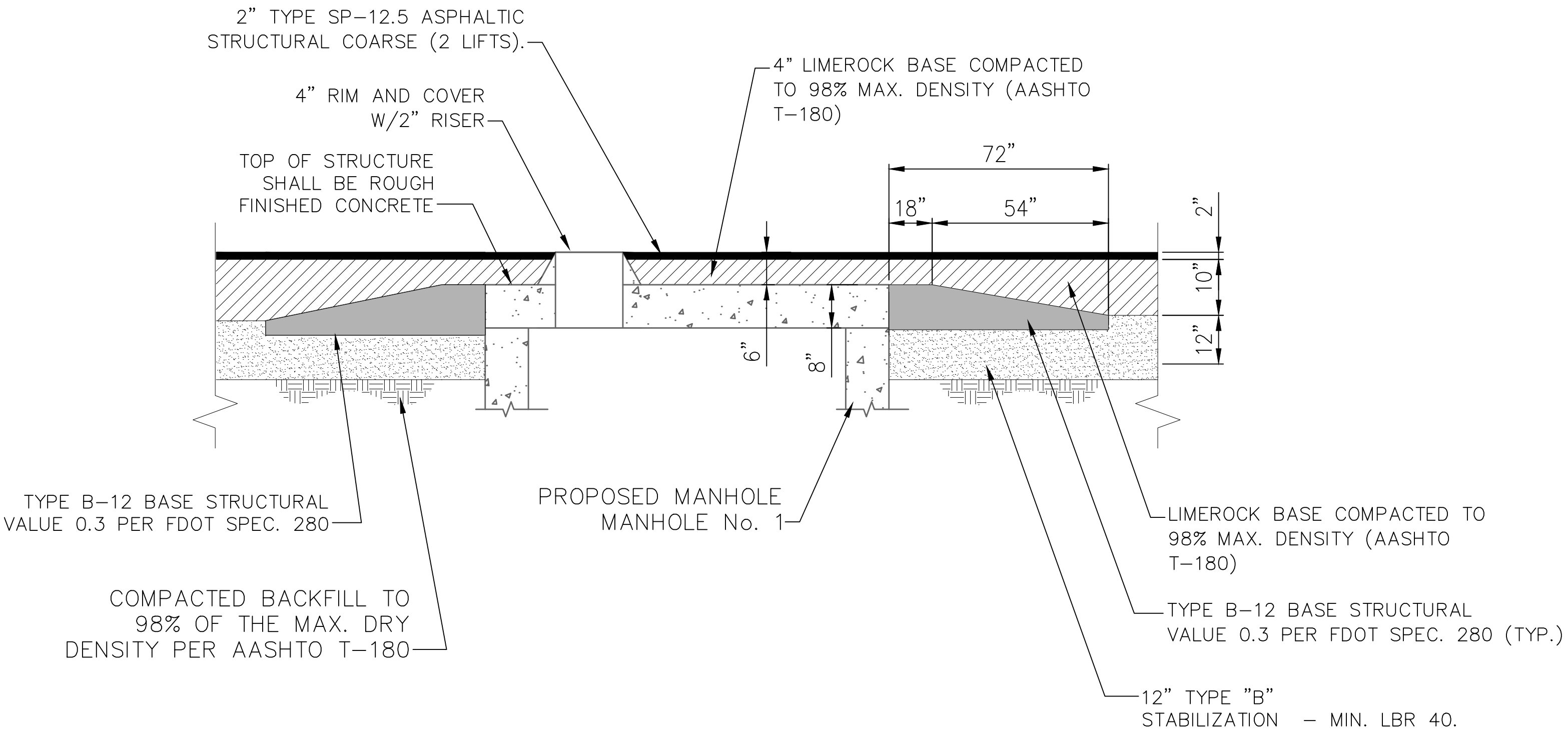
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 RELOCATION  
 GENERAL DETAILS

SHEET  
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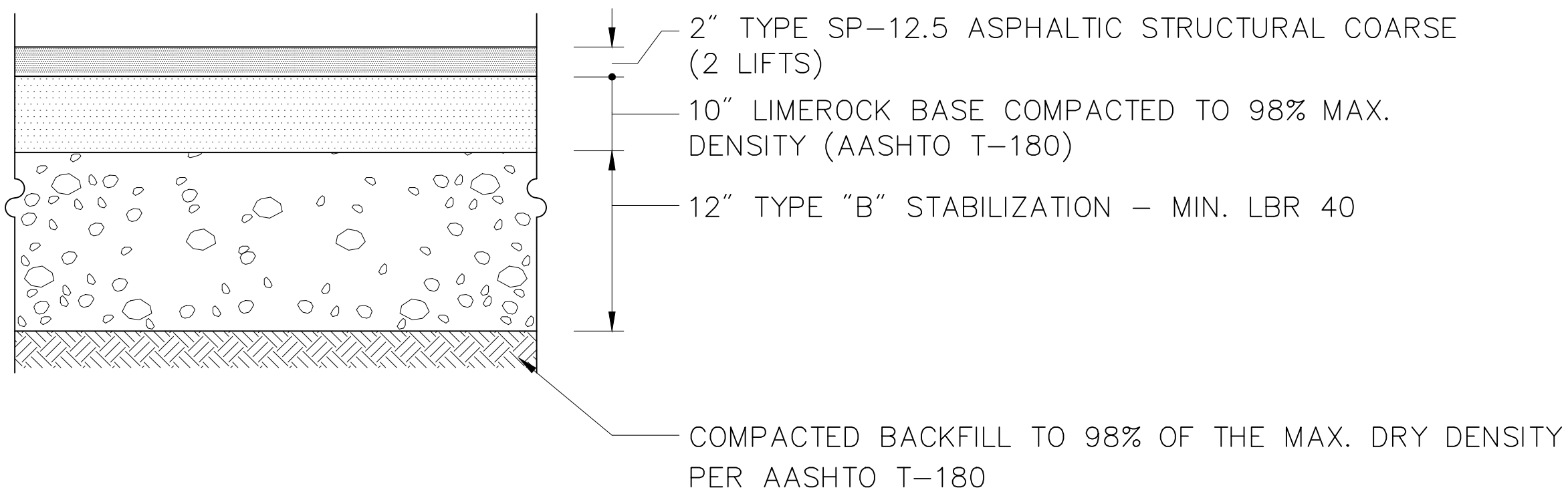
D-4





1. Manhole No. 1 Pavement Section Detail

N.T.S.



2. Asphalt Pavement Typical Section

N.T.S.

Source: VHB

LD\_430

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DATE	DESCRIPTION	DATE	DESCRIPTION



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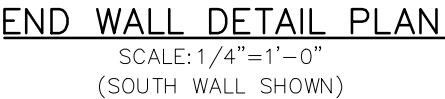
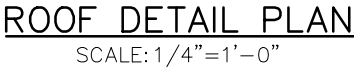


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D-5



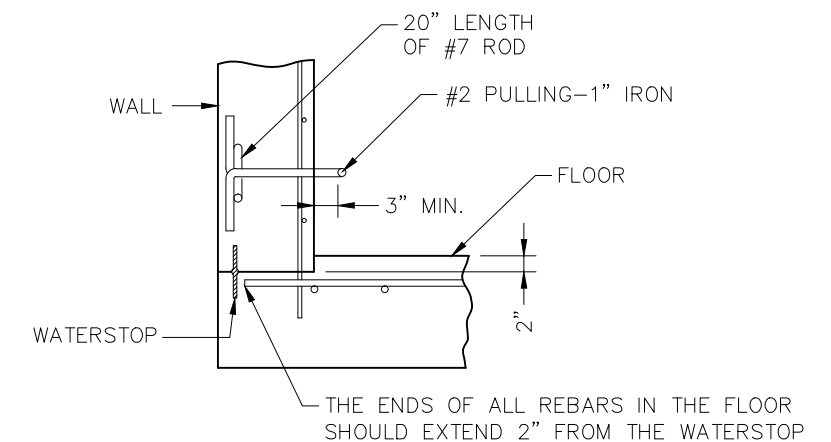
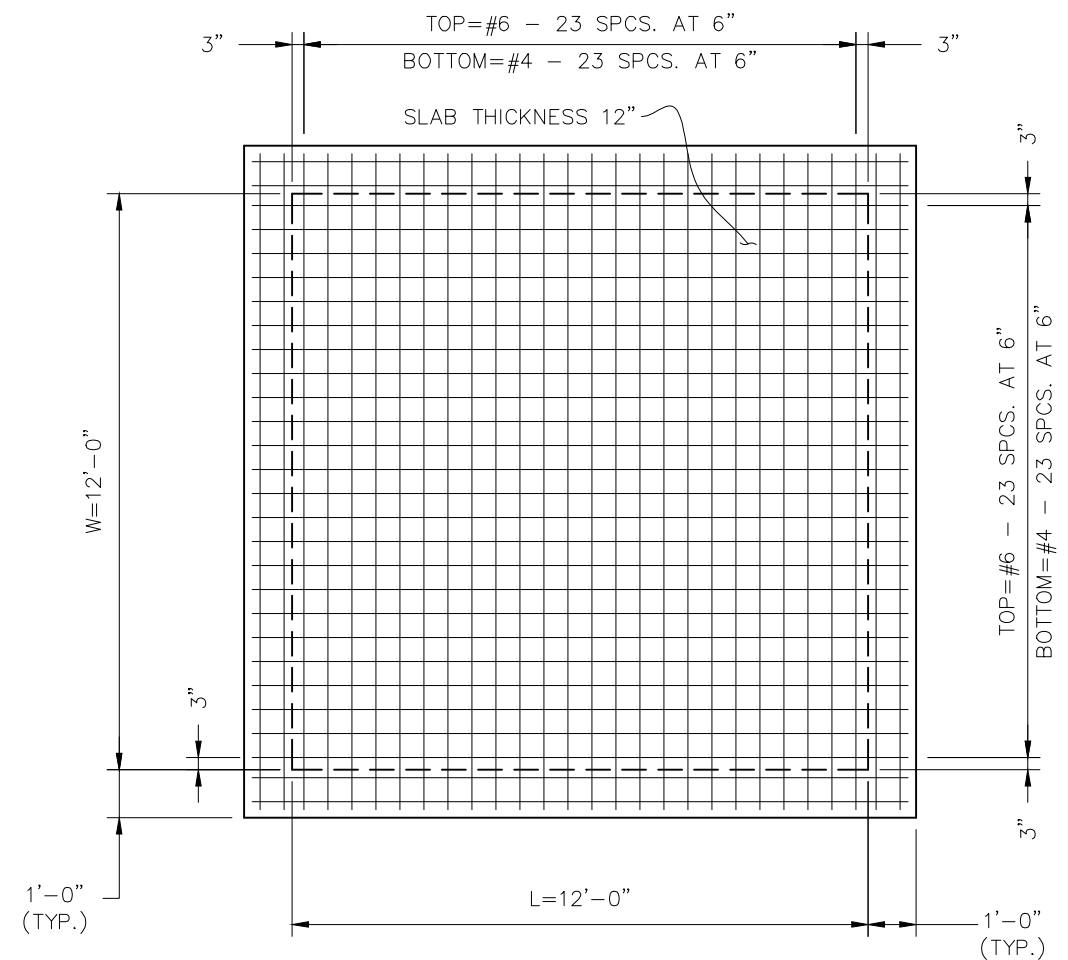
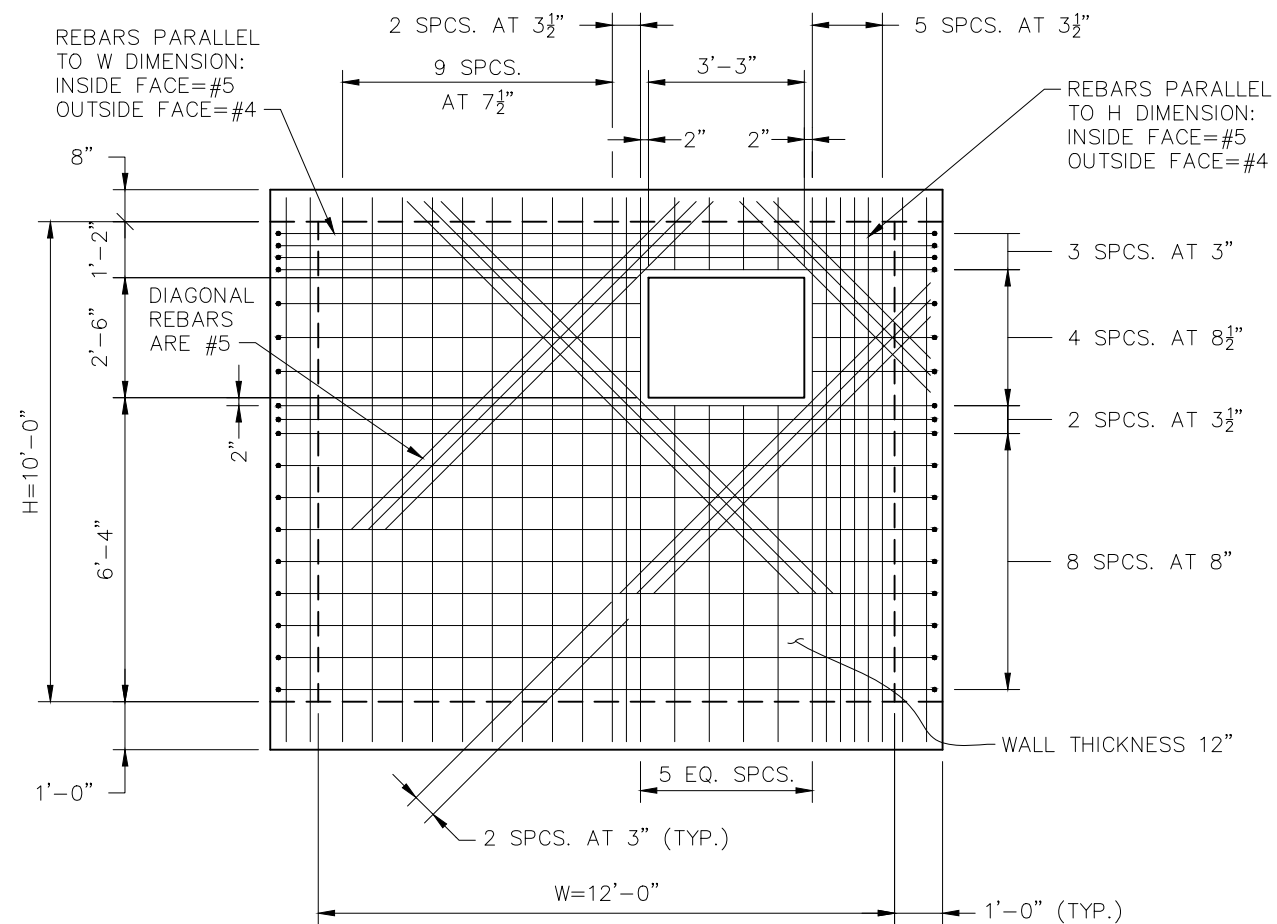


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*NO.*

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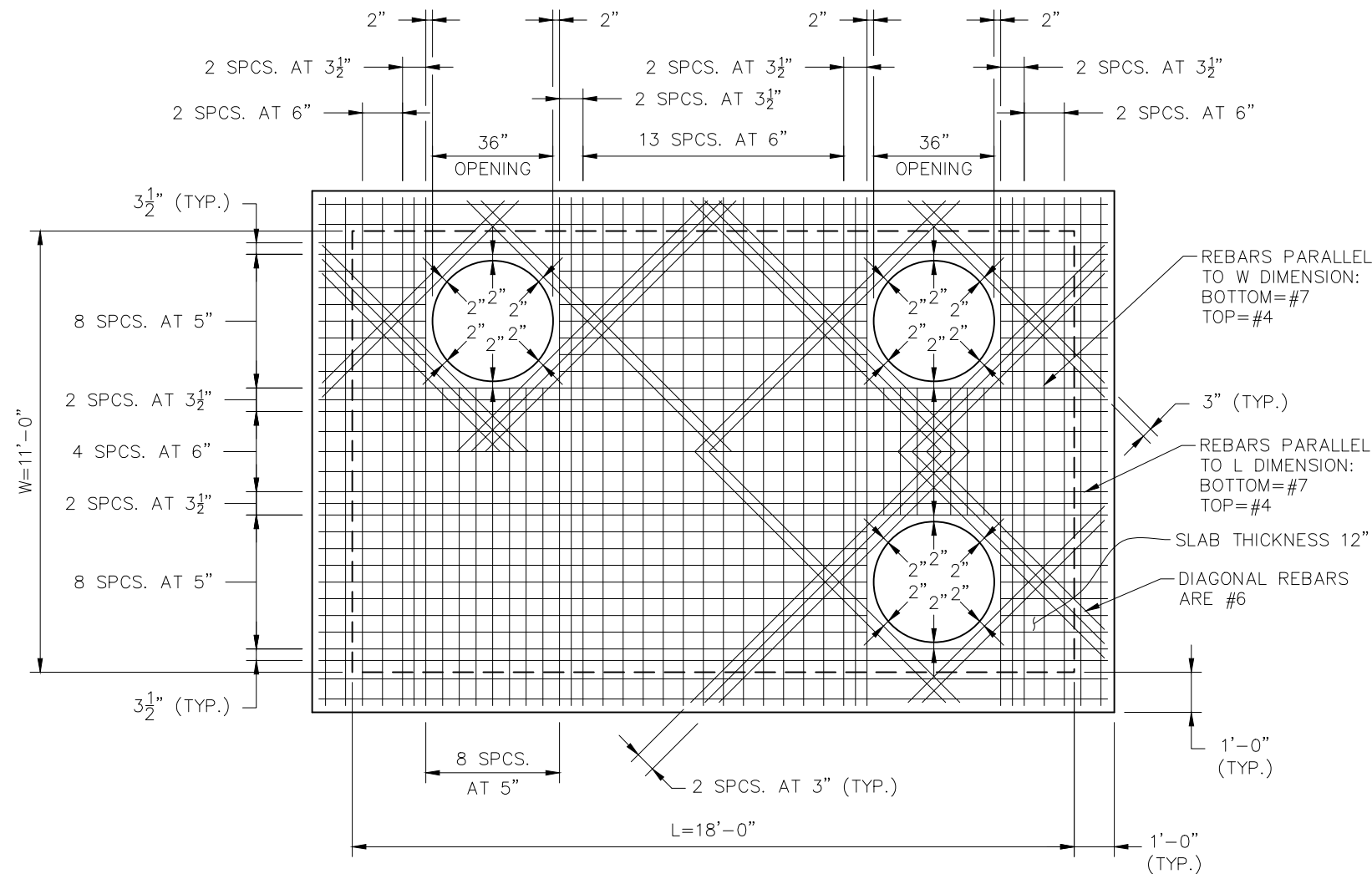
S-1





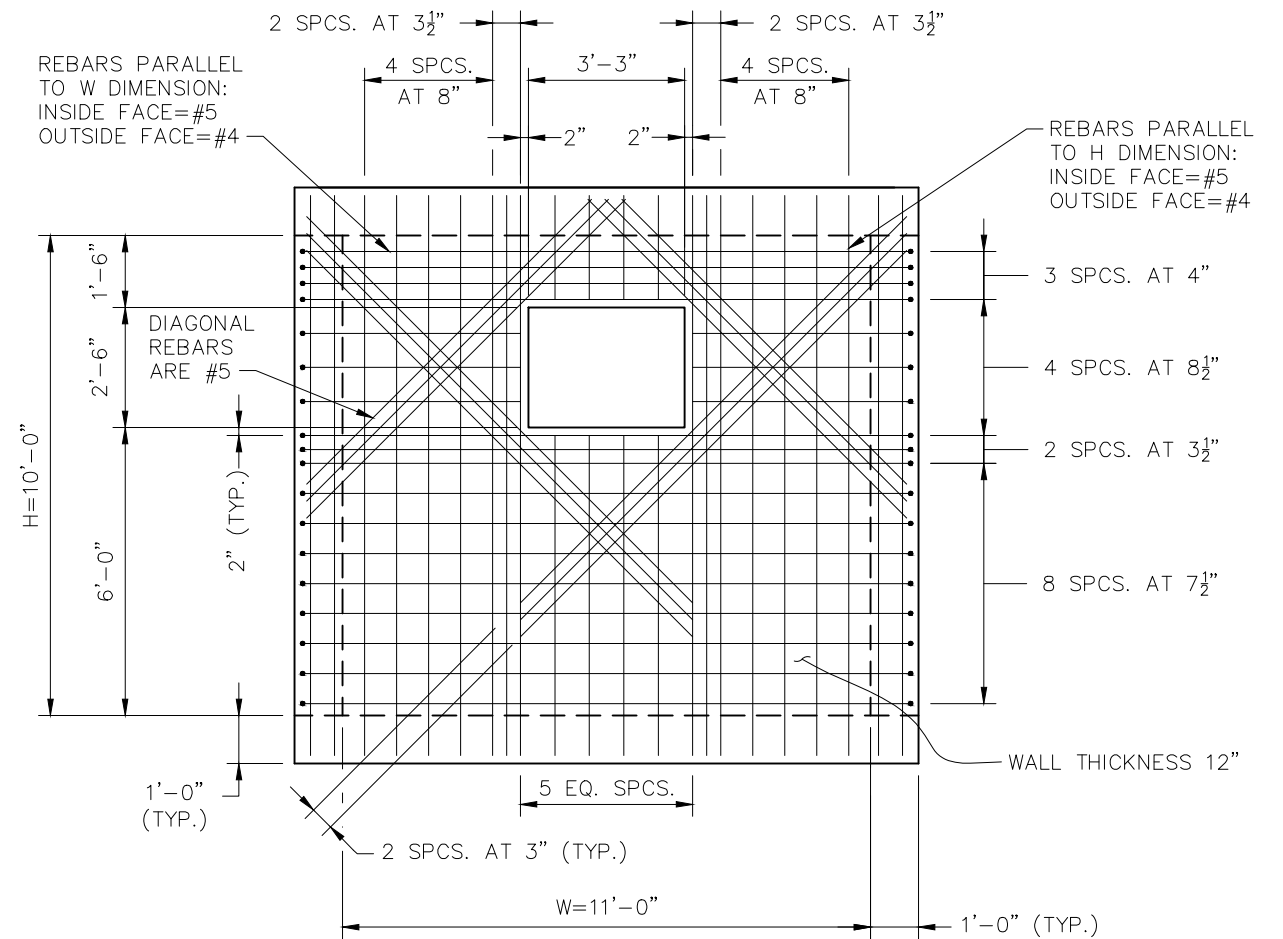
-2





**ROOF DETAIL PLAN**  
SCALE: 1/4"=1'-0"

**GENERAL NOTES:**  
1. SEE SHEET S-1



**END WALL DETAIL PLAN**  
SCALE: 1/4"=1'-0"  
(EAST WALL SHOWN, WEST WALL SIMILAR)

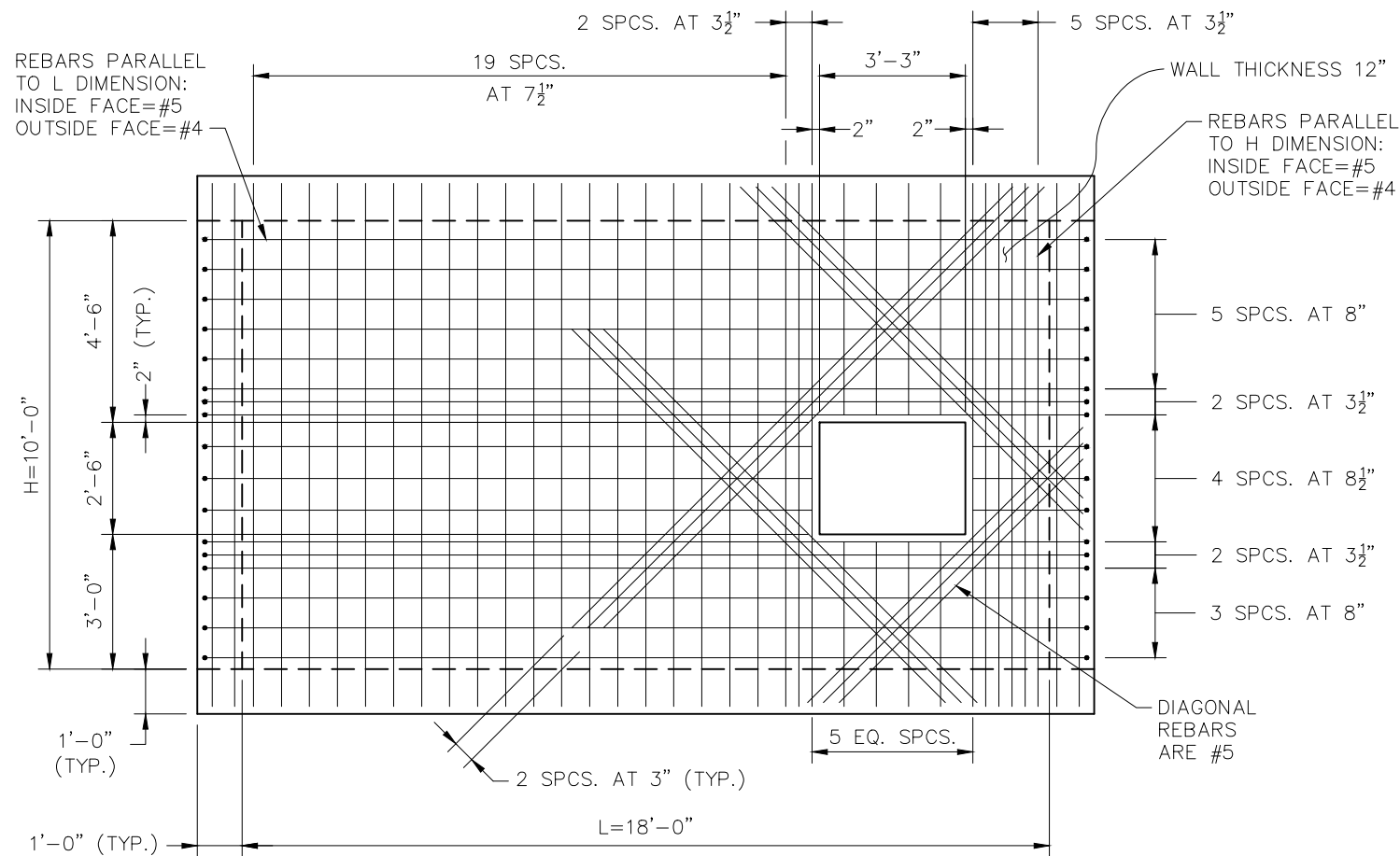
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DATE	DESCRIPTION	DATE	DESCRIPTION



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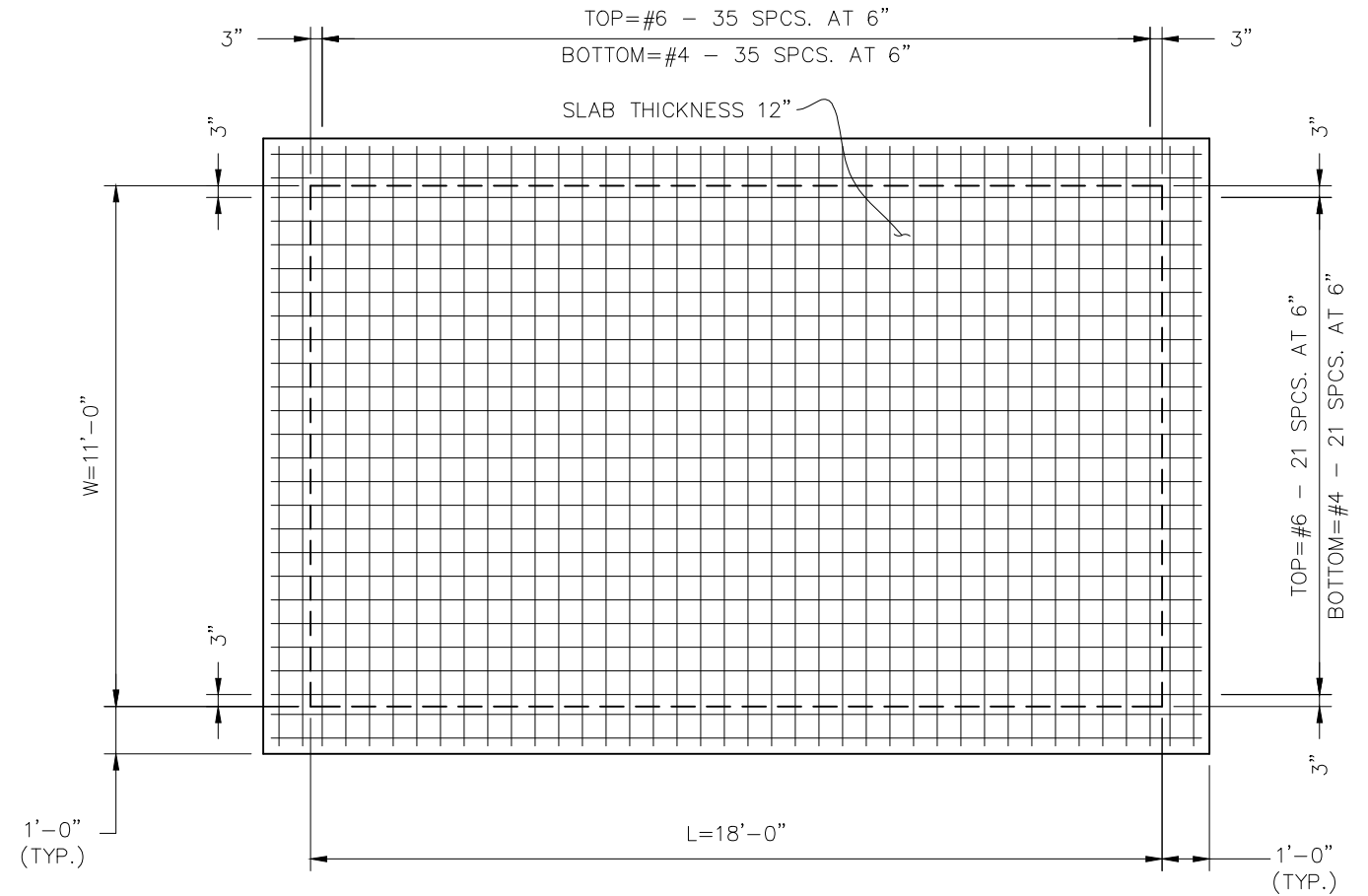
AT&T DUCT BANK RELOCATION MANHOLE 3 STRUCT. DET.		SHEET NO.
		S-3



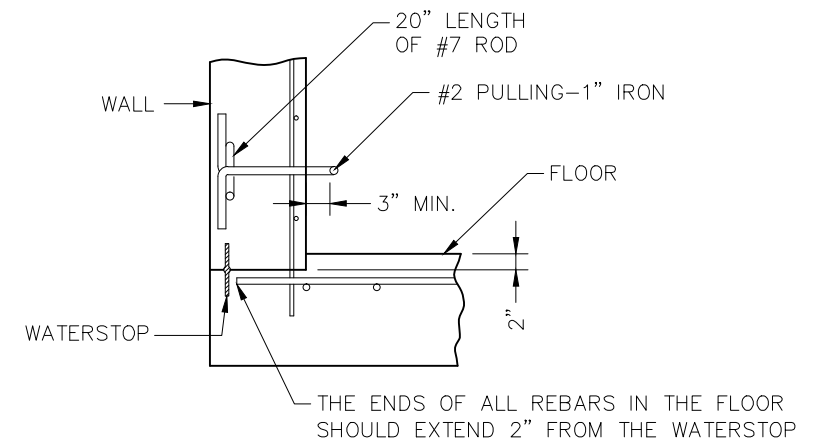


**SIDEWALL DETAIL PLAN**  
SCALE: 1/4"=1'-0"  
(SOUTH WALL SHOWN, NORTH WALL SIMILAR)



**GENERAL NOTES:**  
1. SEE SHEET S-1



**FLOOR PLAN DETAIL**  
SCALE: 1/4"=1'-0"



**SIDEWALL DETAIL PLAN**  
SCALE: 1/2"=1'-0"  
(FOR CLARITY, NOT ALL REINFORCING OR CLEAR COVERS ARE SHOWN.)

REVISIONS				 <b>Vanasse Hangen Brustlin, Inc.</b> Transportation, Land Development, Environmental Services 225 E. Robinson Street, Suite 300 Orlando, FL 32801 (407)839-4006 Certificate of Authorization # 3932	 <b>CITY OF ORLANDO</b> PUBLIC WORKS	<b>AT&amp;T DUCT BANK RELOCATION MANHOLE 3 STRUCT. DET.</b>	<b>SHEET NO.</b> S-4
DATE	DESCRIPTION	DATE	DESCRIPTION				