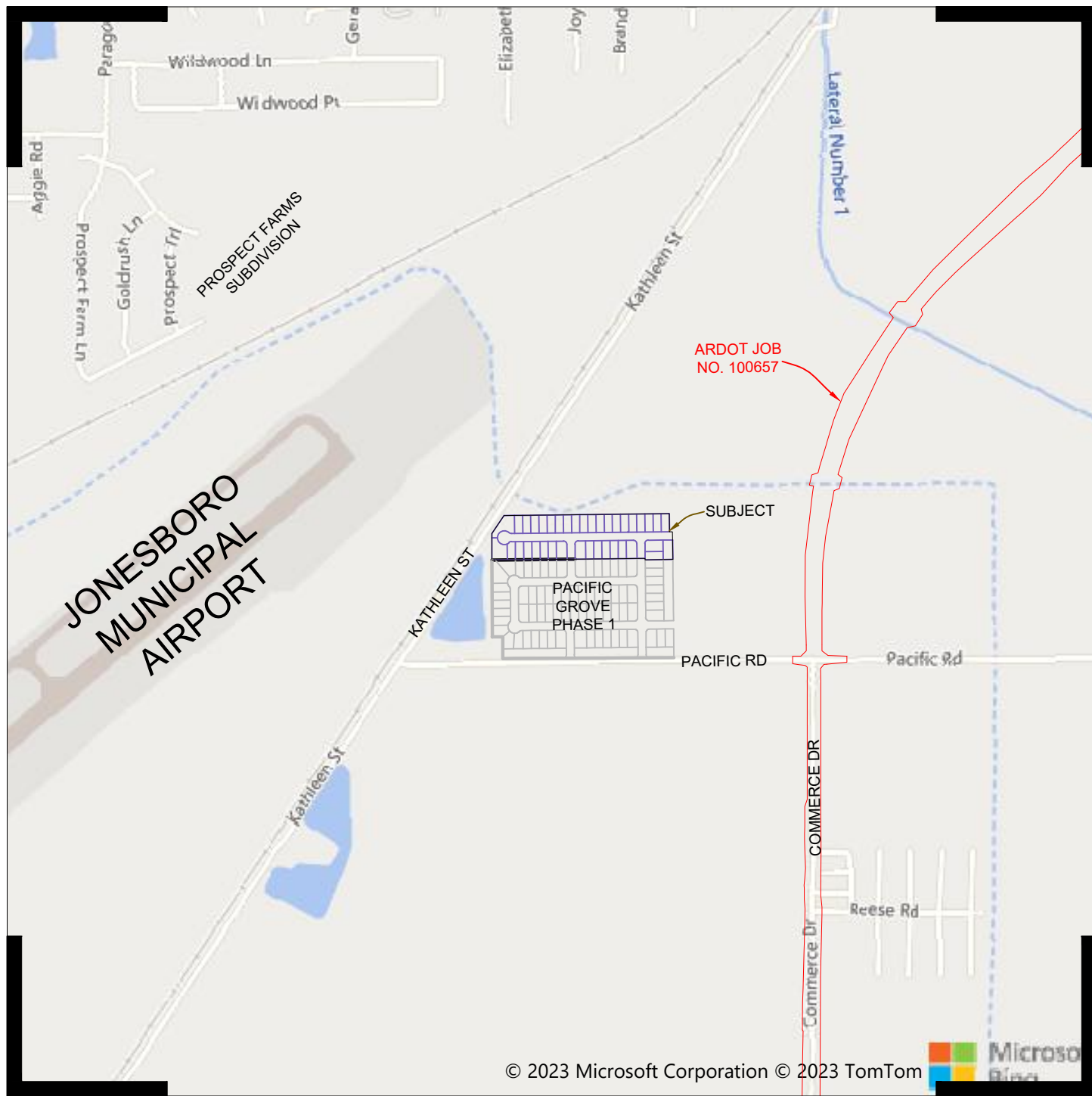


PACIFIC GROVE PHASE 2

JONESBORO, CRAIGHEAD COUNTY, ARKANSAS SITE DEVELOPMENT PLAN

LOCAL CONTACTS

CITY OF JONESBORO ENGINEERING DEPT.	870-932-2438
CITY OF JONESBORO PLANNING AND ZONING	870-932-0406
CITY, WATER, & LIGHT	870-935-5581
AT&T	1-800-464-7928
RITTER COMMUNICATIONS	870-336-3400
SUDDENLINK COMMUNICATIONS	870-935-3615
CENTER POINT ENERGY	870-972-6682



VICINITY MAP
(NOT TO SCALE)

NAD83 Arkansas State Planes, North Zone, US Foot

INDEX OF SHEETS

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SW-3	SEWER PLAN & PROFILE
GR-1	GRADING & DRAINAGE PLAN
ST-1	STREET PLAN & PROFILE
DT-1	EROSION CONTROL DETAILS
DT-2	WATER DETAILS
DT-3	SANITARY SEWER DETAILS
DT-4	CONSTRUCTION DETAILS

PACIFIC GROVE - PHASE 2
COVER PAGE



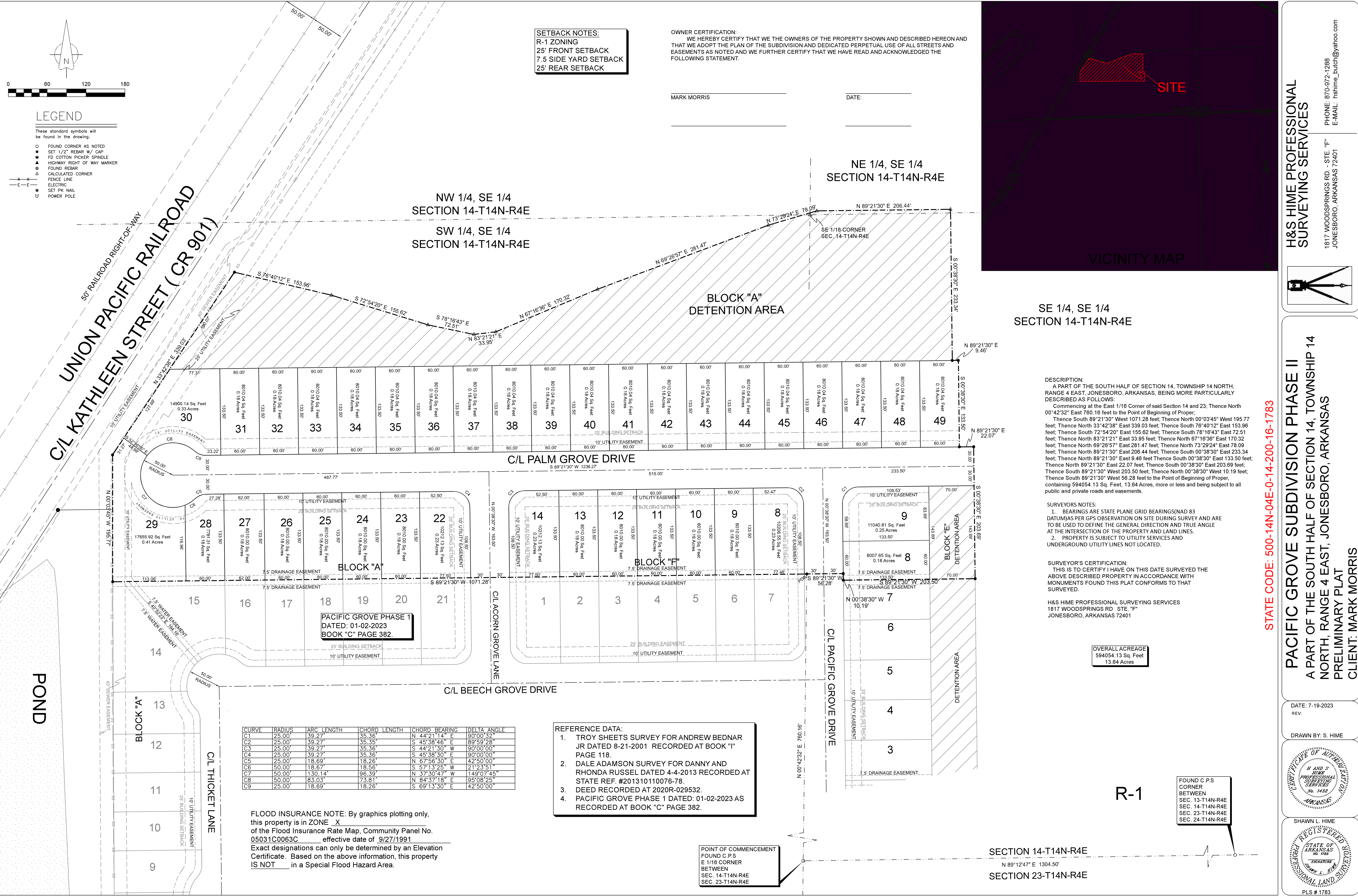
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DATE	BY	DESCRIPTION

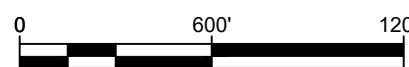
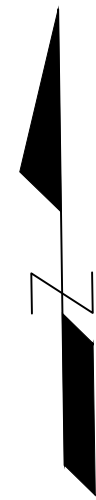
DRAWING INFO.	
DRAWN BY:	JMH
DATE:	7/24/2023
SCALE:	1"=77'

SHEET NUMBER:
C-1

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MARK MORRIS





PACIFIC GROVE - PHASE 2

KEY MAP



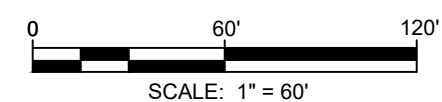
REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.	
DRAWN BY:	JMH
DATE:	7/24/2023
SCALE:	1"=600'

SHEET NUMBER:
OV-1

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REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.	
DRAWN BY:	JMH
DATE:	7/24/2023
SCALE:	1"=60'

SHEET NUMBER:
OV-2

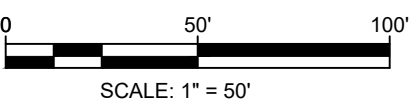
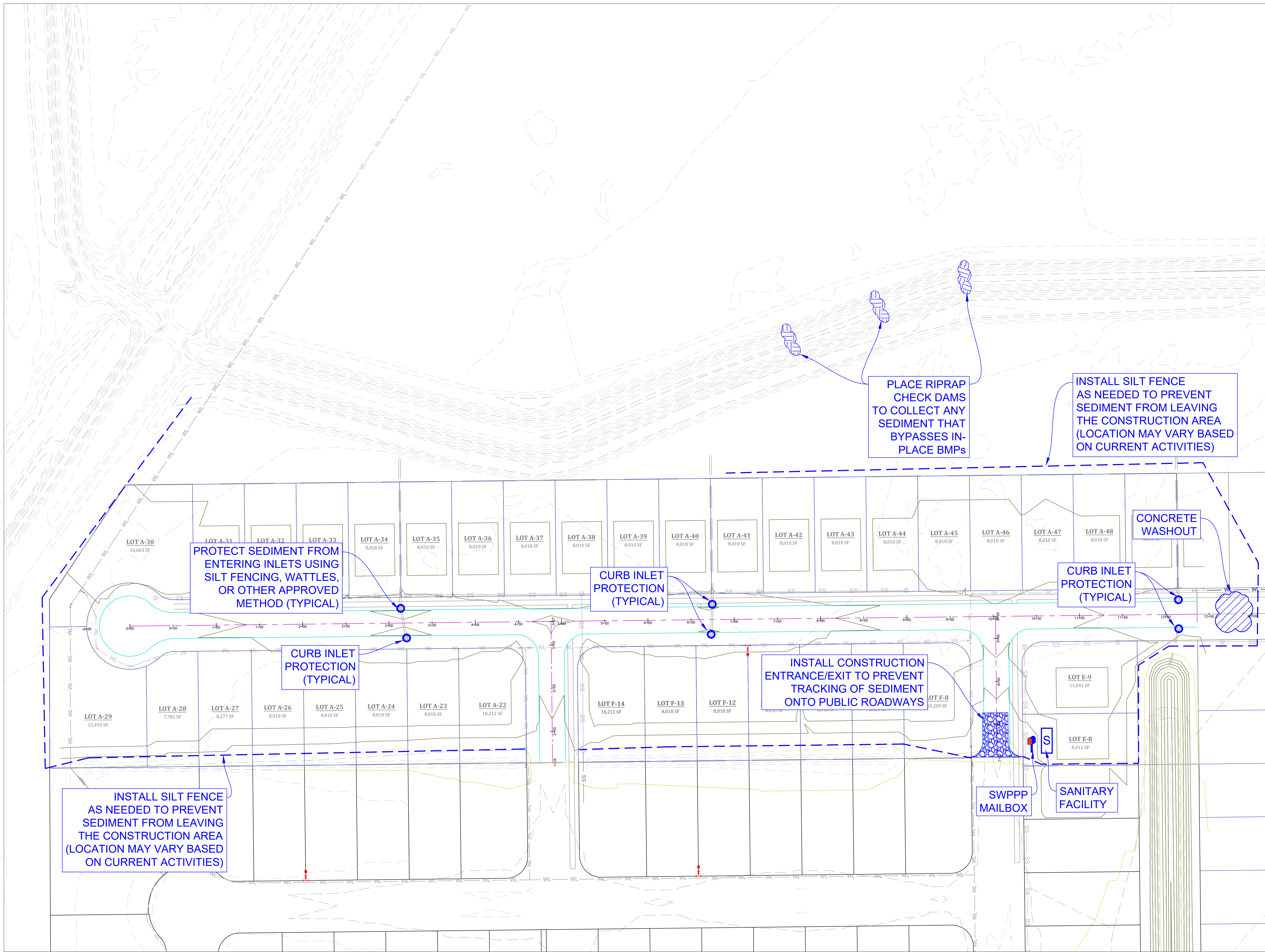


PACIFIC GROVE - PHASE 2

OVERALL UTILITY MAP

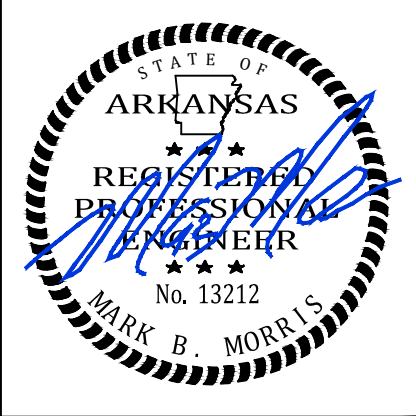
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PACIFIC GROVE - PHASE 2

EROSION CONTROL PLAN



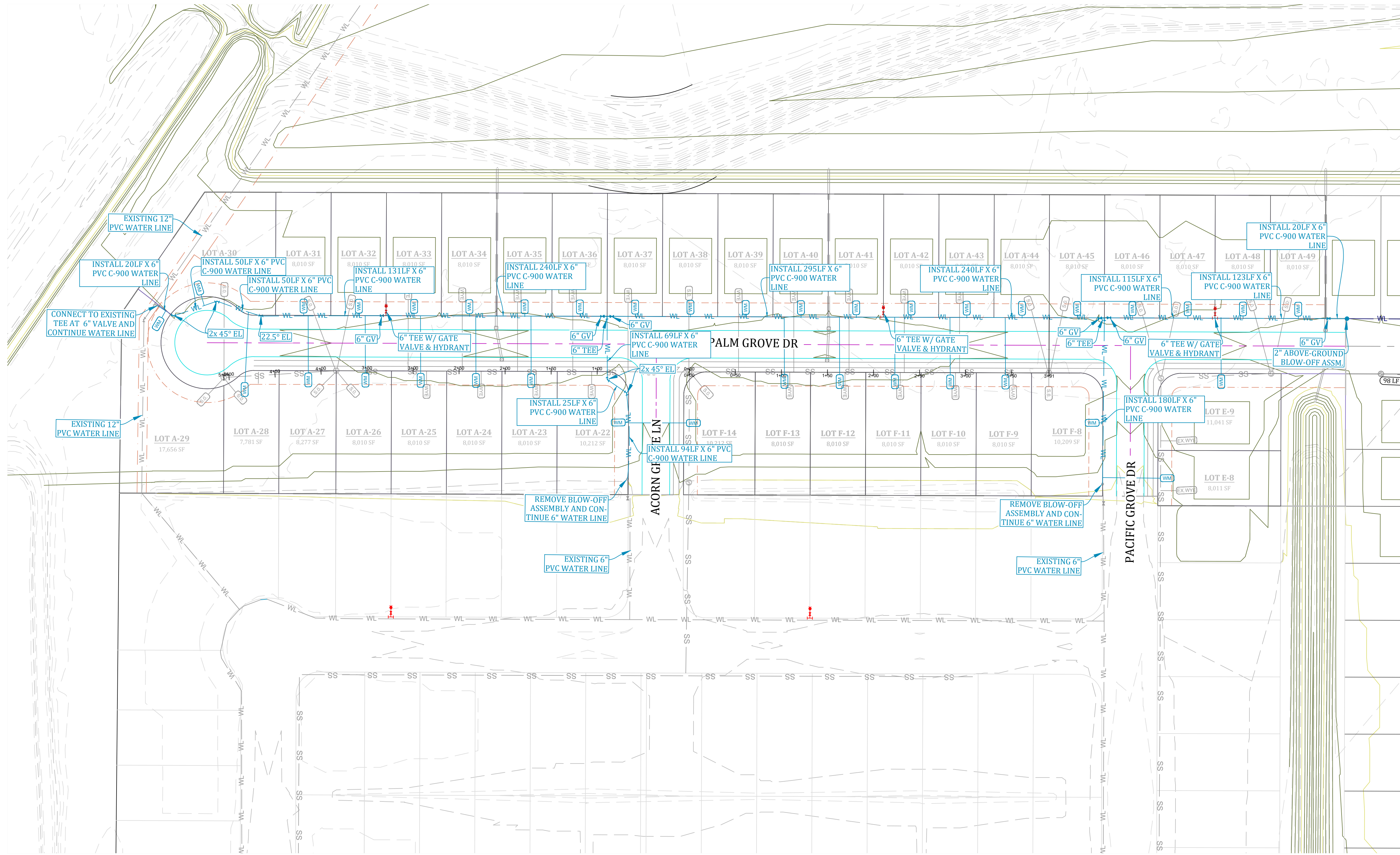
REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.	
DRAWN BY:	JMH
DATE:	8/23/2023
SCALE:	1"=50'

SHEET NUMBER:
E-1

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LEGEND

CURB

SIDEWALK

SL-1

WATER LINE

WATER METER

FIRE HYDRANT

BLOW-OFF ASSEMBLY

GATE VALVE

SD

STORM DRAIN INLET

SD

STORM DRAIN PIPE

SS

SANITARY SEWER

S

SEWER MANHOLE

WYE

SEWER WYE

S.O.

SEWER STUB-OUT

EX.WYE

EX. SEWER WYE

EX.S.O.

EX. SEWER STUB-OUT

NOTE: SYMBOLS REPRESENTED IN LEGEND MAY NOT ALL BE INCLUDED ON THIS SHEET
"RESPECTIVE SYMBOLS REPRESENTED IN PLAN VIEW ARE NOT TO SCALE"

TOTAL WATERLINE QUANTITIES:
1652 LF - 6" C-900 PVC WATERLINE
23 - 3/4" SHORT SERVICES
14 - 3/4" LONG SERVICES

PRESSURES:
STATIC PRESSURE = 64 PSI
RESIDUAL PRESSURE = 55 PSI

WATER AND ELECTRIC NOTES:

- CONTRACTOR SHALL PROVIDE NECESSARY ELECTRICAL CONDUIT & PERMANENT MARKERS W/ GRAY PVC SCH 40 (2") & PVC SCH 40 (4") & 36" RAD ELBOWS FOR RISERS AND A STRING & MOUSE BLOWN IN THE CONDUIT. CONTRACTOR SHALL OBTAIN AN ELECTRICAL PLAN FROM CITY AND INSTALL THE ELECTRICAL CONDUIT AS SPECIFIED BY CWL (CONTRACTOR SHALL OBTAIN CUL SPECIFICATIONS).
- CONTRACTOR SHALL PROVIDE 3/4" METER STOP, TAP, SERVICE LINE & METER BOX AS REQUIRED BY CWL & INSTALL AS REQUIRED BY CWL.
- CONTRACTOR SHALL PROVIDE ENGINEER W/ "AS-BUILT" DIMENSIONS FOR WYES, VALVES, TEES, BENDS, FIRE HYDRANTS, & WATER METERS.
- CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS FOR ALL SEWER, WATER, & ELECTRICAL LINE LATERALS & PROVIDE LABOR & MATERIAL TO BACKFILL ALL SEWER, WATER & ELECTRICAL STREET CUTS WITH SANDY MATERIAL (P.I. <10) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE COMPACTION TESTS AT 2' INTERVALS. CONTRACTOR SHALL PROVIDE LABOR AND MATERIAL FOR ALL SEWER & WATER LINE MAINS THAT CROSS A STREET AND BACKFILL THEM WITH SANDY (P.I. <10) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE MATERIAL COMPACTION TESTS AT 2' INTERVALS.
- A 12 GA SOLID TRACER WIRE SHALL BE INSTALLED WITH WATER LINE MAIN WHERE THERE SHALL BE A PERMANENT WATER LINE MARKER @ THE BEGINNING, THE END, AND 70' INTERVALS IN BETWEEN WHERE THE TRACER WIRE IS INSTALLED. THE TRACER WIRE SHALL BE INSTALLED ABOVE THE WATER LINE AND CONNECTED TO THE PERMANENT MARKERS IN A MANNER THAT WILL INSURE A CONTINUOUS CONNECTION OF THE TRACER LINE.
- CONTRACTOR SHALL CALL ARK ONE CALL FOR LOCATES PRIOR TO CONSTRUCTION.
- CWL SHALL PROVIDE FIRE HYDRANT, 6" D.I. GATE VALVE, VALVE BOX W/ LID, AND 6" BY LINE SIZE D.I. TEE. CONTRACTOR SHALL PROVIDE LABOR FOR INSTALLATION AND CONCRETE BLOCKING. (SEE DETAIL SHEET)
- CONTRACTOR SHALL NOTIFY ENGINEER TO DETERMINE ELEVATIONS FOR MANHOLE TOPS, WATERLINE ELEVATION WHERE IT CROSSES PROPOSED STORM DRAINS, WATER METER BOX ELEVATIONS, VALVE BOX ELEVATIONS, AND FIRE HYDRANT ELEVATIONS. WATER LINE LOCATION AROUND INLETS WATER LINE SHALL BE INSTALLED AT AN ELEVATION WHERE HYDRANTS ARE LOCATED TO ENSURE HYDRANT WILL BE AT PROPER HEIGHT WHEN FINISHED GRADE HAS BEEN OBTAINED.
- CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH PLANS TO INSURE THE WATER LINE DEPTH OF INSTALLATION IS BELOW THE PROPOSED STORM DRAIN ELEVATION. CONTRACTOR WILL BE REQUIRED TO COME BACK AND LOWER WATER LINE (AT THE CONTRACTOR'S EXPENSE) IF IT INTERFERES WITH THE STORM DRAIN INSTALLATION.
- IF CONTRACTOR CAN NOT INSURE WATER LINE INSTALLATION TO BE BELOW STORM DRAIN, THEN THE CONTRACTOR SHALL POSTPONE WATER LINE INSTALLATION UNTIL STORM DRAIN HAS BEEN INSTALLED.
- CONTRACTOR SHALL PROVIDE OWNER WITH ONE YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP.
- CONTRACTOR SHALL PROVIDE ENGINEER WITH LIEN RELEASES FOR MATERIALS AND LABOR; BACTERIAL SAMPLE RESULTS, AND MODEL & YEAR OF WATER LINE VALVES WITHIN 30 DAYS OF COMPLETION OF WORK.
- CONTRACTOR SHALL DRESS UP PROJECT AFTER INSTALLATION TO THE CONDITION IT AS PRIOR TO BEGINNING CONSTRUCTION. MOUND BACKFILL OVER TRENCHES 1' TO 2' TO ALLOW FOR SETTLING IN AREAS OUT OF THE STREET.
- CONTRACTOR SHALL REVIEW DETAIL SHEETS TO ENSURE PROPER INSTALLATION OF VALVES, FIRE HYDRANTS, CONCRETE BLOCKING, SERVICE LINES, MANHOLE INVERTS, AND DROP ASSEMBLIES.
- CONTRACTOR SHALL OBTAIN A CURRENT SET OF CWL SPECIFICATIONS AND REVIEW THEM. CWL SPECIFICATIONS ARE TO BE ADHERED TO AND MADE A PART OF THIS SET OF PLANS. CONTRACTOR SHALL USE CWL SPECIFICATIONS TO INCLUDE ITEMS NOT SHOWN OR REFERRED TO IN THIS SET OF PLANS. ALL STREET EXCAVATION MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR ON THE ADJACENT LOTS OR AS DIRECTED BY OWNER.
- ALL STREET EXCAVATION MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR ON THE ADJACENT LOTS OR AS DIRECTED BY OWNER.
- CONTRACTOR SHALL PLACE 8 MIL POLYWRAP OVER DUCTILE IRON FITTINGS PRIOR TO PLACING CONCRETE BLOCKING TO PREVENT CONCRETE FROM ENCASEING BOLTS & NUTS.
- ALL WATER LINES 4" TO 12" DIAMETER SHALL BE AWWA C-900 PRESSURE CLASS 150 DR 18. ALL 2" AND 3" DIAMETER WATER LINES SHALL BE SDR 21 CLASS 200 (ASTM 2241). ALL SEWER LINES SHALL BE ASTM 2241 SDR-26.
- WATER LINE AND SANITARY SEWER LINE SHALL MAINTAIN 18" MINIMUM VERTICAL SEPARATION. WATER LINE AND STORM DRAIN SHALL MAINTAIN 36" MINIMUM HORIZONTAL SEPARATION TO PREVENT FREEZING. MAINTAIN 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER LINE.
- CONSTRUCTION SHALL BEGIN ONLY AFTER APPROVED PLANS FROM THE ARKANSAS DEPARTMENT OF HEALTH ARE SUBMITTED TO CWL, AND ALL NECESSARY FEES ARE PAID IN FULL. CONSTRUCTION BY CONTRACTORS SHALL THEN BEGIN ONLY AFTER THE RIGHT OF WAY HAS BEEN CLEARED. THE ENTIRE SECTION STAKED. THE ELEVATIONS CAREFULLY CHECKED, AND A PRE-CONSTRUCTION MEETING HAS BEEN HELD. A POST CONSTRUCTION MEETING WILL BE HELD W/ CONTRACTOR PRESENT TO VERIFY ALL CONSTRUCTION IS ACCEPTABLE TO CWL PRIOR TO THE INSTALLATION OF ELECTRICAL WIRE.
- DEVELOPER MUST SHOW PROOF OF ADEQUATE INSURANCE COVERAGE, (ARKANSAS WORKER'S COMPENSATION, \$1,000,000.00 MINIMUM GENERAL LIABILITY, AND \$1,000,000.00 MINIMUM AUTO LIABILITY) CONTRACTOR MUST HAVE A STATE CONTRACTORS LICENSE. CONTRACTOR MUST HAVE A COMPETENT PERSON AT THE JOB SITE AS DEFINED BY OSHA.
- FINAL CLEAN-UP OF THE SITE SHALL INCLUDE THE REMOVAL AND DISPOSAL OFF-SITE OF ALL CONSTRUCTION DEBRIS, AND SURPLUS MATERIALS.
- DURING CONSTRUCTION, WORK SHALL BE INSPECTED BY THE DEVELOPER'S CONSULTING ENGINEER FOR NECESSARY SAFETY PRACTICES, PROPER MATERIALS, AND WORKMANSHIP. CWL WILL PROVIDE RANDOM INSPECTIONS TO INSURE THAT THE PLANS APPROVED BY THE ARKANSAS DEPARTMENT OF HEALTH AND CWL ARE FOLLOWED CONCERNING WORKMANSHIP AND MATERIALS.
- IF SEWER AND WATER LINES HAVE NOT BEEN ACCEPTED BY CWL WITHIN 360 DAYS AFTER MANHOLE TESTS, LOW PRESSURE AIR TESTS, HYDROSTATIC TESTS AND BACTERIAL TESTS, ALL TESTS WILL BE REQUIRED TO BE REPEATED AND RE-CERTIFIED.
- INSTALLATION OF DOMESTIC WATER METER TAPS ARE REQUIRED TO BE MADE DURING THE INSTALLATION OF THE NEW WATER MAINS.
- OBSTRUCTING DRAINAGE PIPES SHALL BE REMOVED. IF IN SOUND, UNDAMAGED CONDITION, THEY MAY BE CLEANED AND RE-INSTALLED. IF UNSOUND OR DAMAGED, THEY SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL. WHEN THE ANGLE BETWEEN CENTER LINES OF A DRAINAGE PIPE AND WATER MAIN WILL PERMIT, THE WATER MAIN MAY BE INSTALLED BY TUNNELING. PROVIDED THE DRAINAGE PIPE IS NOT DAMAGED AND THE WATER MAIN IS LAID PROPERLY, AS AN ALTERNATIVE IN THE CASE OF CORRUGATED METAL PIPE, A SECTION MAY BE CUT FROM THE DRAINAGE PIPE, AND RESTORATION ACCOMPLISHED WITH NEW PIPE AND COUPLING BANDS.
- CWL ENGINEERING DEPT. MUST APPROVE ANY WATER OR SEWER LINES THAT WILL BE INSTALLED CLOSER THAN 5' PARALLEL WITH EDGE OF PAVED STREET SURFACE.
- REPAIRS SHALL BE MADE IN ACCORDANCE WITH AWWA. IF VALVE IS CLOSED BY THE CONTRACTOR WITHOUT CWL'S KNOWLEDGE, THE NEW SECTION MUST BE TESTED FOR WATER QUALITY AND FLUSHED. THE CWL INSPECTOR WILL WITNESS ALL REPAIRS.
- WATER LINE FITTINGS SHALL BE CLASS 350 DUCTILE IRON OR CAST IRON.
- TRENCH DEPTH WILL BE SUCH AS TO ALLOW A MINIMUM COVER OF 42" OVER WATER MAIN.
- LEAKAGE TESTS SHALL BE MADE PRIOR TO STERILIZATION OPERATIONS. THE TEST PERIOD SHALL BE TWO (2) HOURS. TEST PRESSURE SHALL BE 1.5 TIMES THE CALCULATED WORKING PRESSURE OF THE MAIN, BUT NOT LESS THAN 100 PSI. THE LINE WILL NOT BE ACCEPTED UNLESS OR UNTIL THE TOTAL IS LESS THAN THAT SPECIFIED IN AWWA C-900-93 FOR DUCTILE IRON AND AWWA C-905-94 FOR PVC PIPE.
- ALL WATER LINES SHALL BE STERILIZED IN ACCORDANCE WITH AWWA C-661-94. ANY NEW CONSTRUCTION OR REPAIRED WATER MAIN MUST BE THOROUGHLY CLEANED, FLUSHED, DISINFECTED, AND TESTED FOR BACTERIOLOGICAL QUALITY BEFORE IT CAN BE PLACED IN SERVICE. FOLLOWING A CONTRACT PERIOD OF NOT LESS THAN 24 HOURS, THE CHLORINATED WATER SHALL BE FLUSHED FROM THE SYSTEM, AND THE SYSTEM FILLED WITH WATER OF NORMAL CHLORINE CONTENT. SAMPLES OF WATER THEN SHALL BE TAKEN ON TWO CONSECUTIVE DAYS FROM THE LINES AND DELIVERED TO THE CWL - LABORATORY FOR BACTERIAL ANALYSIS. THIS PROCESS SHALL BE CONTINUED UNTIL THE SAMPLES SHOW THE WATER IS SAFE FOR DOMESTIC REQUIREMENTS. FLUSHING DEVICES SHOULD BE SIZED TO PROVIDE FLOWS WHICH WILL GIVE A VELOCITY OF AT LEAST 2.5 FEET PER SECOND IN THE WATER MAIN BEING FLUSHED. NO FLUSHING DEVICE SHALL BE DIRECTLY CONNECTED TO ANY SEWER. IF THE LINE HAS SET FOR A ONE MONTH OR LONGER BEFORE FINAL ACCEPTANCE, IT SHALL BE RSTERILIZED, FLUSHED, AND BACTERIAL TESTED.
- THE DEVELOPER AND ENGINEER ARE RESPONSIBLE FOR METER BOX LOCATIONS. ANY CONFLICTS THAT REQUIRE PLASTIC BOX(S) TO BE CHANGED OUT TO CONCRETE BOX(S) WILL BE AT THE EXPENSE OF THE DEVELOPER AND/OR CONTRACTOR.
- IF UNSAFE PRACTICES ARE DISCOVERED BY CWL DURING INSPECTIONS OF WORKMANSHIP AND MATERIALS, CWL WILL NOTIFY OSHA. THIS PROCEDURE IN NO WAY OBLIGATES CWL FOR THE RESPONSIBILITY OF THE CONTRACTOR'S SAFETY PRACTICES.
- DURING CONSTRUCTION, WORK SHALL BE INSPECTED DAILY BY THE ENGINEER OF RECORD FOR PROPER MATERIALS, WORKMANSHIP, AND INSTALLATION IN ACCORDANCE WITH THE APPROVED ARKANSAS DEPARTMENT OF HEALTH AND CITY WATER AND LIGHT APPROVED PLANS.

NOTE: TRACER WIRE AND PEDESTAL SHOULD BE INSTALLED WHEN WATER LINE NOT ACCOMPANIED WITH ELECTRIC LINE.

OPERATING NOTE:

THE OPERATING ROUTINE SHALL INCLUDE NECESSARY PROTECTIVE MEASURES TO DETECT AND REMOVE OR DESTROY ANY CONTAMINANT OF CONCERN OR REGULATION THAT MIGHT ENTER THE DISTRIBUTION SYSTEM. EVERY PRECAUTION MUST BE TAKEN AGAINST THE POSSIBILITY OF SEWAGE CONTAMINATION OF THE WATER IN THE DISTRIBUTION SYSTEM. WATER MAINS AND SANITARY SEWERS SHALL BE CONSTRUCTED AS FAR APART AS PRACTICABLE, AND SHALL BE SEPARATED BY UNDISTURBED AND COMPACTED EARTH. A MINIMUM HORIZONTAL DISTANCE OF 10' SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINE OR OTHER SOURCES OF CONTAMINATION. WATER LINES AND SEWER SHALL NOT BE LAID IN THE SAME TRENCH EXCEPT OF THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATER MAINS NECESSARILY CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATERLINE WILL BE AT LEAST 18" ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN A WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST 10' EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18" OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENTS. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH. A MINIMUM HORIZONTAL DISTANCE OF 3' SHALL BE MAINTAINED BETWEEN WATER LINES AND OTHER UNDERGROUND UTILITIES OF A NON-SANITARY NATURE (GAS, ELECTRIC, ETC.). EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH AND HUMAN SERVICES.

TRENCH SETTLEMENT NOTE:

CITY WATER & LIGHT IS NOT RESPONSIBLE FOR ANY SETTLEMENT OVER WATER & SEWER TRENCHES THAT OCCURS BEFORE OR AFTER THE WARRANTY PERIOD.

WATER METER NOTE:

WATER METERS ARE SHOWN PICTORIALLY ONLY. WATER METERS SHALL BE LOCATED AT THE RIGHT OF WAY APPROXIMATELY AT THE CENTER OF THE LOT. THERE SHOULD BE A MINIMUM OF 10 FEET SEPARATION BETWEEN WATER METERS AND SANITARY SEWER SERVICES.

WATER CONNECTION NOTE:

CONTRACTOR SHALL NOT INITIATE TIE IN CONNECTION TO EXISTING WATER MAIN AFTER 3 P.M. DURING NORMAL WORKING DAYS OR ON FRIDAY AFTER 12 P.M., UNLESS APPROVED BY CITY WATER & LIGHT ENGINEERING DEPT. CONTRACTOR SHALL NOTIFY CWL INSPECTOR OF TENTATIVE TIME FRAME FOR CONNECTION 24 HOURS PRIOR TO ACTIVITY.

ALL SEWER WYES SHALL BE A MINIMUM OF 10' FOOT AWAY FROM PROPERTY CORNERS.

ELECTRICAL CONDUIT NOTE:

ALL ELECTRICAL CONDUIT SHALL HAVE A MINIMUM 48" OF COVER BELOW FINISHED GRADE.

NO TRANSFORMER, JUNCTION BOX, OR PULL BOX TO BE PLACED OVER WATER FITTINGS WITHOUT CITY WATER AND LIGHT APPROVAL.

PACIFIC GROVE - PHASE 2

GENERAL WATER PLAN

REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.		
DRAWN BY:	JMH	
DATE:	7/24/2023	
SCALE:	1"=60'	

SHEET NUMBER:

WT-1

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LEGEND

	CURB		STORM DRAIN INLET
	SIDEWALK		STORM DRAIN PIPE
	CORRIDOR CROSS SECTION LINE		SANITARY SEWER
	WATER LINE		SEWER MANHOLE
	WATER METER		SEWER WYE
	FIRE HYDRANT		SEWER STUB-OUT
	BLOW-OFF ASSEMBLY		EX. SEWER WYE
	GATE VALVE		EX. SEWER STUB-OUT

NOTE: SYMBOLS REPRESENTED IN LEGEND MAY NOT ALL BE INCLUDED ON THIS SHEET
RESPECTIVE SYMBOLS REPRESENTED IN PLAN VIEW ARE NOT TO SCALE

TOTAL SEWERLINE QUANTITIES:
1136 LF - 8" SDR26 PVC
11 - SHORT LATERALS
10 - LONG LATERALS
6 - SHORT STUB-OUTS
10 - LONG STUB-OUT

SANITARY SEWER NOTES:

- CONTRACTOR SHALL PROVIDE WYES OR STUBOUTS FOR EACH LOT. THEY SHALL BE PLACED ON THE LOW ELEVATION SIDE OF LOT OR IN THE CENTER OF THE LOT IF THE ELEVATION IS FLAT.
- CONTRACTOR SHALL PROVIDE ENGINEER W/AS-BUILT DIMENSIONS FOR WYES, VALVES, TEES, BENDS, FIRE HYDRANTS, & WATER METERS.
- CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS FOR ALL SEWER, WATER, & ELECTRICAL LINE LATERALS & PROVIDE LABOR & MATERIAL TO BACKFILL ALL SEWER, WATER & ELECTRICAL STREET CUTS WITH SANDY MATERIAL (P.I. <15) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE COMPACTION TESTS AT 2' INTERVALS. CONTRACTOR SHALL PROVIDE LABOR AND MATERIAL FOR ALL SEWER & WATER LINE MAINS THAT CROSS A STREET AND BACKFILL THEM WITH SANDY (P.I. <15) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE MATERIAL COMPACTION TESTS AT 2' INTERVALS.
- CONTRACTOR SHALL CALL ARK ONE CALL FOR LOCATES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY ENGINEER TO DETERMINE ELEVATIONS FOR MANHOLE TOPS, WATERLINE ELEVATION WHERE IT CROSSES PROPOSED STORM DRAINS, WATER METER BOX ELEVATIONS, VALVE BOX ELEVATIONS, AND FIRE HYDRANT ELEVATIONS, AND WATER LINE LOCATION AROUND INLETS. WATER LINE SHALL BE INSTALLED AT AN ELEVATION WHERE HYDRANTS ARE LOCATED TO ENSURE HYDRANT WILL BE AT PROPER HEIGHT WHEN FINISHED GRADE HAS BEEN OBTAINED.
- CONTRACTOR SHALL PROVIDE OWNER WITH ONE YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP.
- CONTRACTOR SHALL PROVIDE ENGINEER WITH LIEN RELEASES FOR MATERIALS AND LABOR, BACTERIAL SAMPLE RESULTS, AND MODEL & YEAR OF WATER LINE VALVES WITHIN 30 DAYS OF COMPLETION OF WORK.
- CONTRACTOR SHALL DRESS UP PROJECT AFTER INSTALLATION TO THE CONDITION IT AS PRIOR TO BEGINNING CONSTRUCTION. MOUND BACKFILL OVER TRENCHES 1' TO 2' TO ALLOW FOR SETTLING IN AREAS OUT OF THE STREET. ALL STREET EXCAVATION MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR ON THE ADJACENT LOTS OR AS DIRECTED BY OWNER.
- CONTRACTOR SHALL REVIEW DETAIL SHEETS TO ENSURE PROPER INSTALLATION OF VALVES, FIRE HYDRANTS, CONCRETE BLOCKING, SERVICE LINES, MANHOLE INVERTS, AND DROP ASSEMBLIES.
- ALL SEWER LINES SHALL BE ASTM 2241 SDR-26.
- WATER LINE AND SANITARY SEWER LINE SHALL MAINTAIN 18" MINIMUM SEPARATION. WATER LINE AND STORM DRAIN SHALL MAINTAIN 36" MINIMUM SEPARATION TO PREVENT FREEZING. MAINTAIN 10" HORIZONTAL SEPARATION BETWEEN SEWER AND WATER LINE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18" OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENTS.
- CONSTRUCTION SHALL BEGIN ONLY AFTER APPROVED PLANS FROM THE ARKANSAS DEPARTMENT OF HEALTH ARE SUBMITTED TO CWL, AND ALL NECESSARY FEES ARE PAID IN FULL. CONSTRUCTION BY CONTRACTORS SHALL THEN BEGIN ONLY AFTER THE RIGHT OF WAY HAS BEEN CLEARED, THE ENTIRE SECTION STAKED, THE ELEVATIONS CAREFULLY CHECKED, AND A PRE-CONSTRUCTION MEETING HAS BEEN HELD. A POST CONSTRUCTION MEETING WILL BE HELD W/ CONTRACTOR PRESENT TO VERIFY ALL CONSTRUCTION IS ACCEPTABLE TO CWL PRIOR TO THE INSTALLATION OF ELECTRICAL WIRE.
- DEVELOPER MUST SHOW PROOF OF ADEQUATE INSURANCE COVERAGE, (ARKANSAS WORKER'S COMPENSATION, \$1,000,000.00 MINIMUM GENERAL LIABILITY, AND \$1,000,000.00 MINIMUM AUTO LIABILITY.) CONTRACTOR MUST HAVE A STATE CONTRACTORS LICENSE. CONTRACTOR MUST HAVE A COMPETENT PERSON AT THE JOB SITE AS DEFINED BY OSHA.
- DURING CONSTRUCTION, WORK SHALL BE INSPECTED BY THE DEVELOPER'S CONSULTING ENGINEER FOR NECESSARY SAFETY PRACTICES, PROPER MATERIALS, AND WORKMANSHIP. CWL WILL PROVIDE RANDOM INSPECTIONS TO INSURE THAT THE PLANS APPROVED BY THE ARKANSAS DEPARTMENT OF HEALTH AND CWL ARE FOLLOWED CONCERNING WORKMANSHIP AND MATERIALS.
- IF SEWER AND WATER LINES HAVE NOT BEEN ACCEPTED BY CWL WITHIN 360 DAYS AFTER MANDREL TESTS, LOW PRESSURE AIR TESTS, HYDROSTATIC TESTS AND BACTERIAL TESTS, ALL TESTS WILL BE REQUIRED TO BE REPEATED AND RE-CERTIFIED.
- CWL ENGINEERING DEPT. MUST APPROVE ANY WATER OR SEWER LINES THAT WILL BE INSTALLED CLOSER THAN 5' PARALLEL WITH EDGE OF PAVED STREET SURFACE.
- REPAIRS SHALL BE MADE IN ACCORDANCE WITH AWWA.
- ALL SEWER WYES & STUBOUTS SHALL BE EXTENDED ACROSS STREETS TO THE APPROPRIATE LOT LINES. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL LOTS HAVE A SEWER SERVICE.

TRENCH SETTLEMENT NOTE:
CITY WATER & LIGHT IS NOT RESPONSIBLE FOR ANY SETTLEMENT OVER WATER & SEWER TRENCHES THAT OCCURS BEFORE OR AFTER THE WARRANTY PERIOD.

ALL SEWER WYES SHALL BE A MINIMUM OF 10' FOOT AWAY FROM PROPERTY CORNERS.

NOTE: IF UNSAFE PRACTICES ARE DISCOVERED BY CWL DURING OUR INSPECTIONS OF WORKMANSHIP AND MATERIALS, CWL WILL NOTIFY THE OSHA. THIS NO WAY OBLIGATES CWL FOR THE RESPONSIBILITY OF THE CONTRACTORS SAFETY PRACTICES.



PACIFIC GROVE - PHASE 2

GENERAL SEWER PLAN



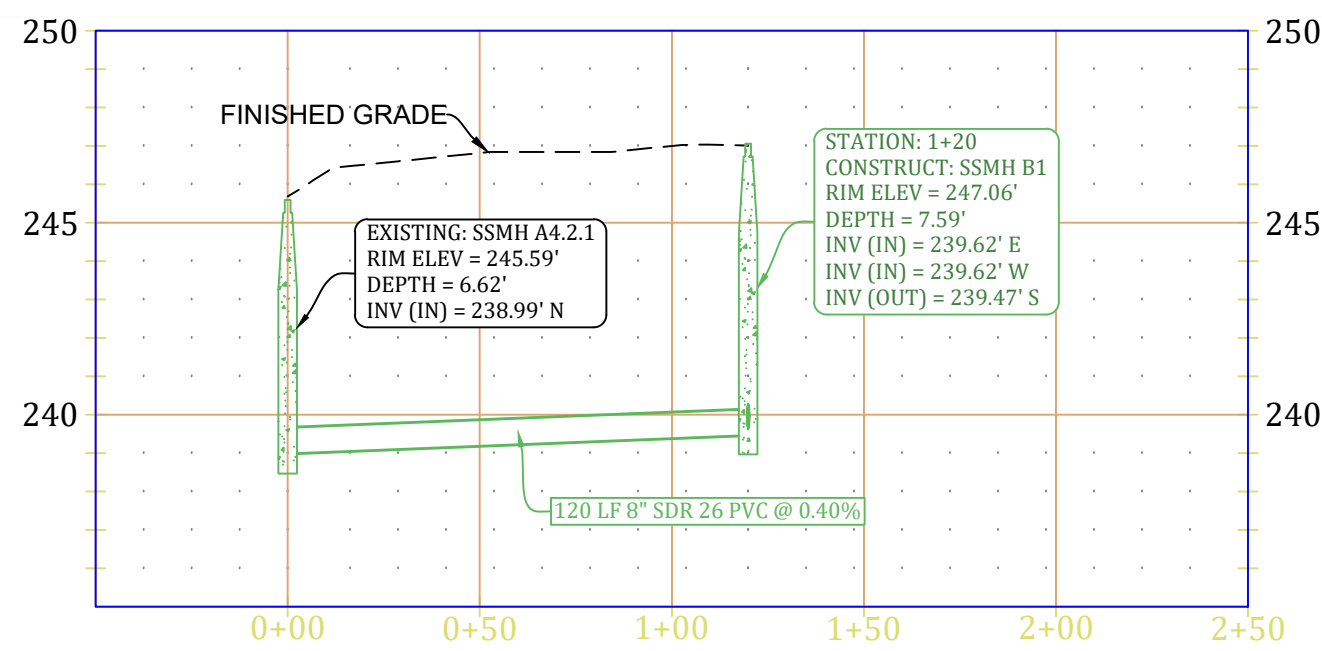
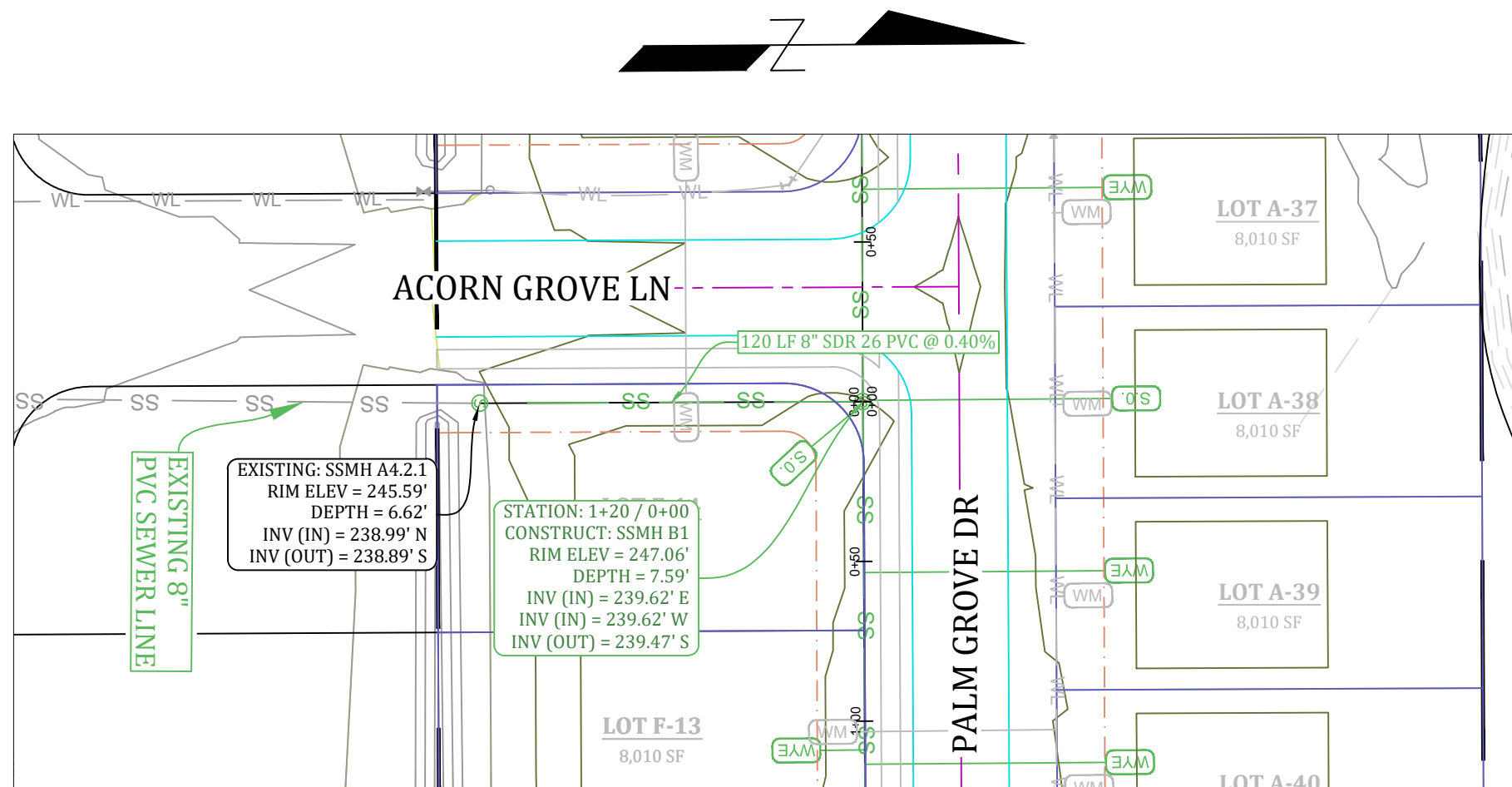
REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.	
DRAWN BY:	JMH
DATE:	1/2/2023
SCALE:	1"=80'

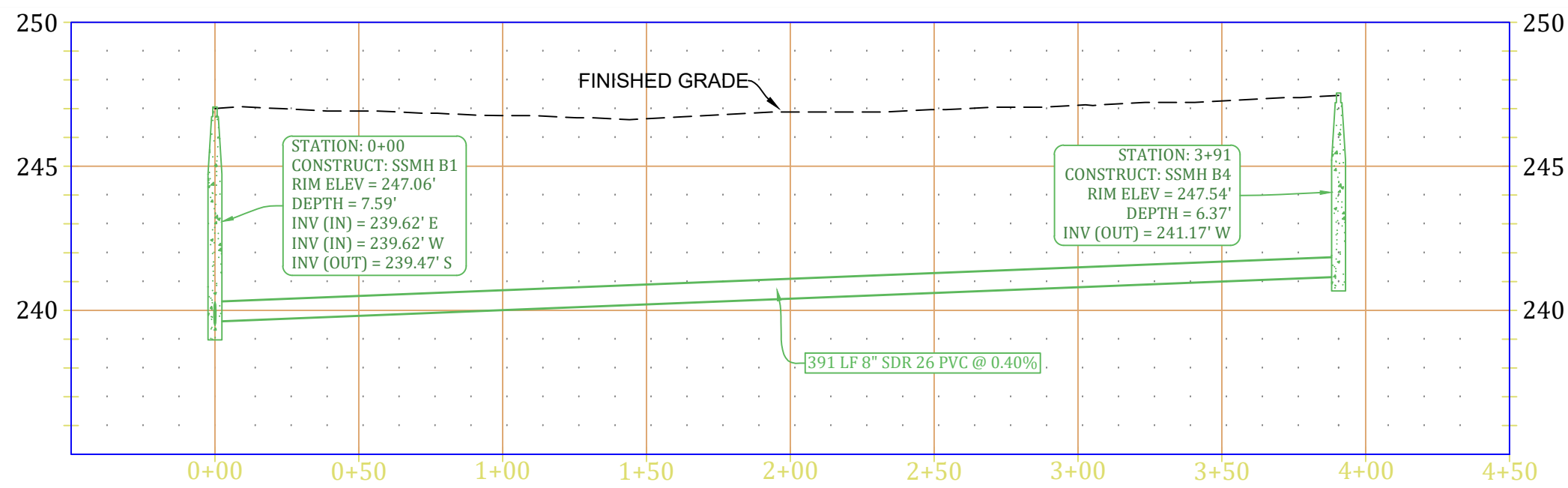
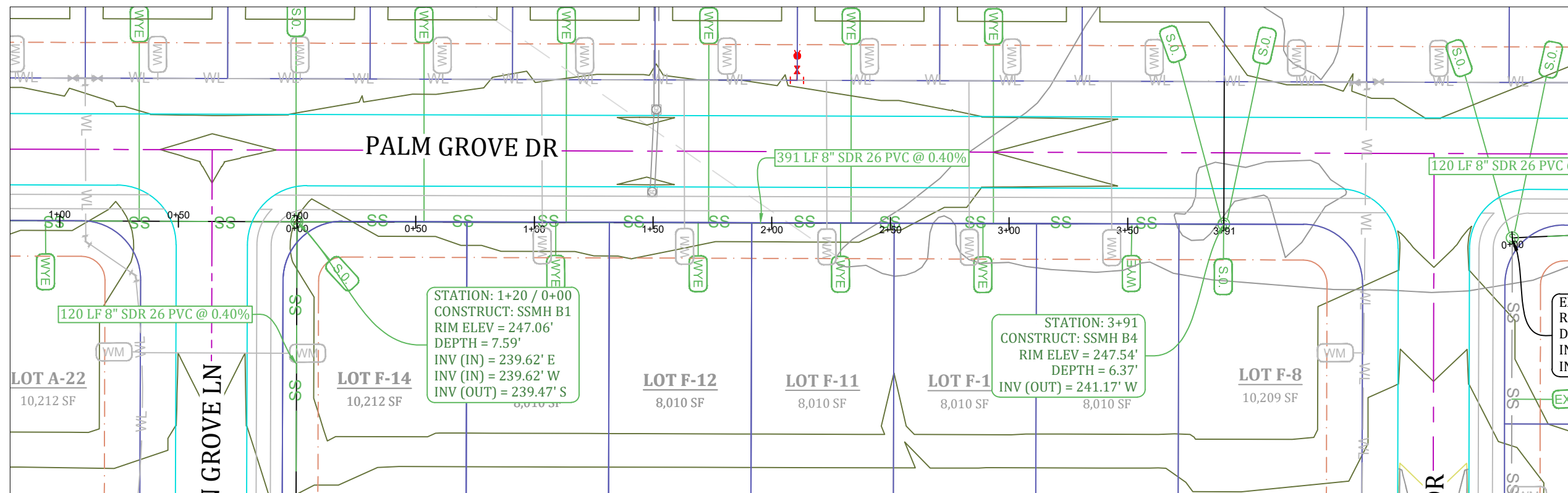
SHEET NUMBER:
SW-1

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JONESBORO, AR 72404
PH: 1-870-919-7700
MARK@MARKMORRISHOMES.COM

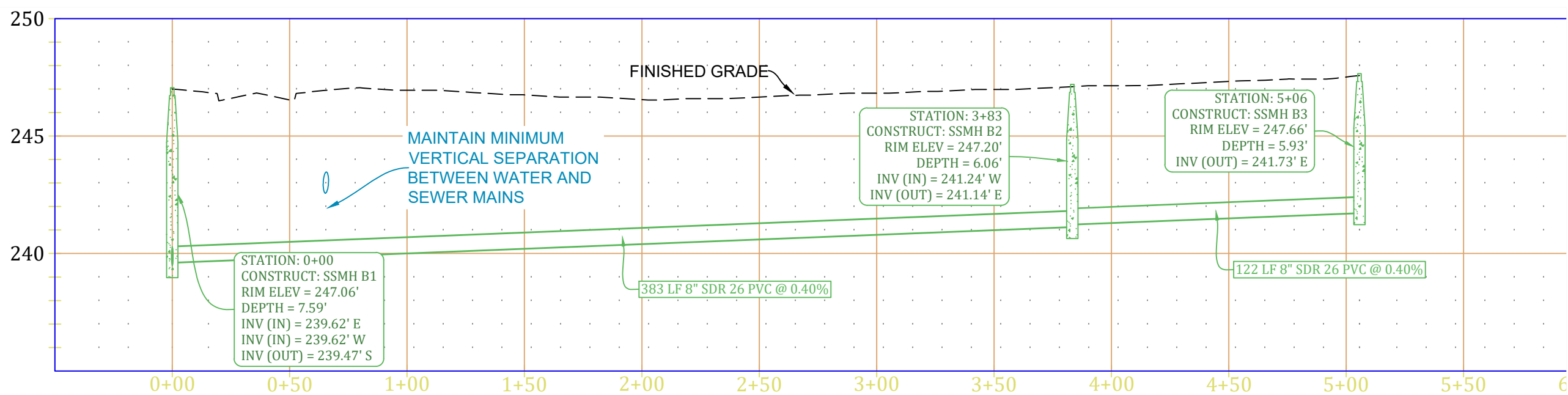
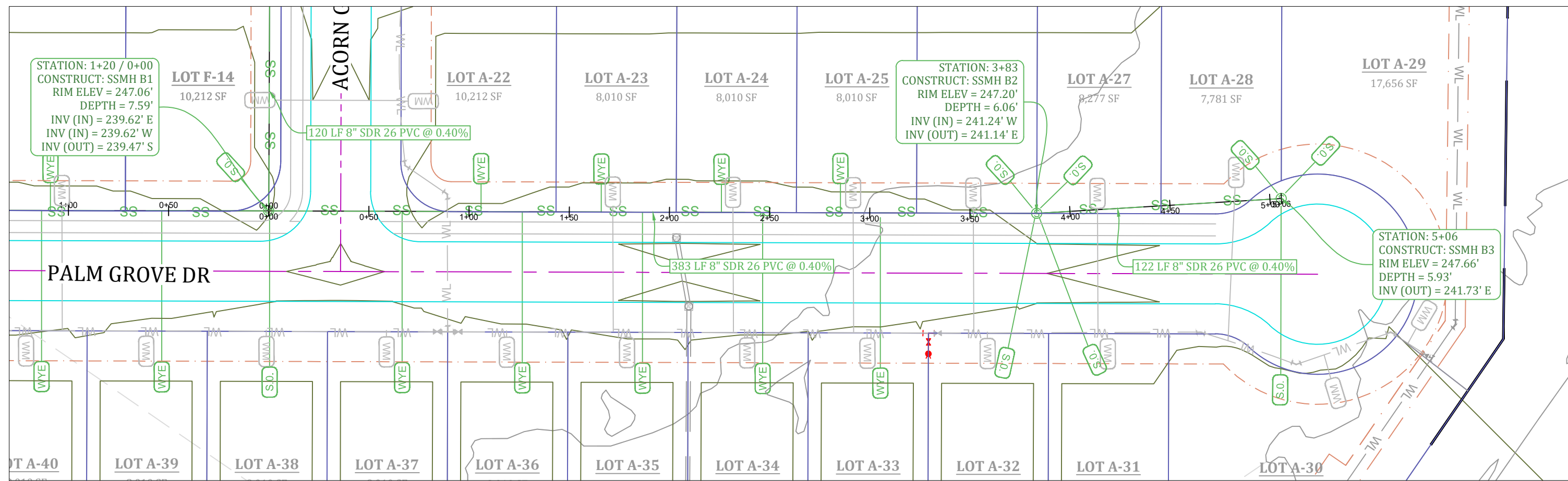
MARK MORRIS



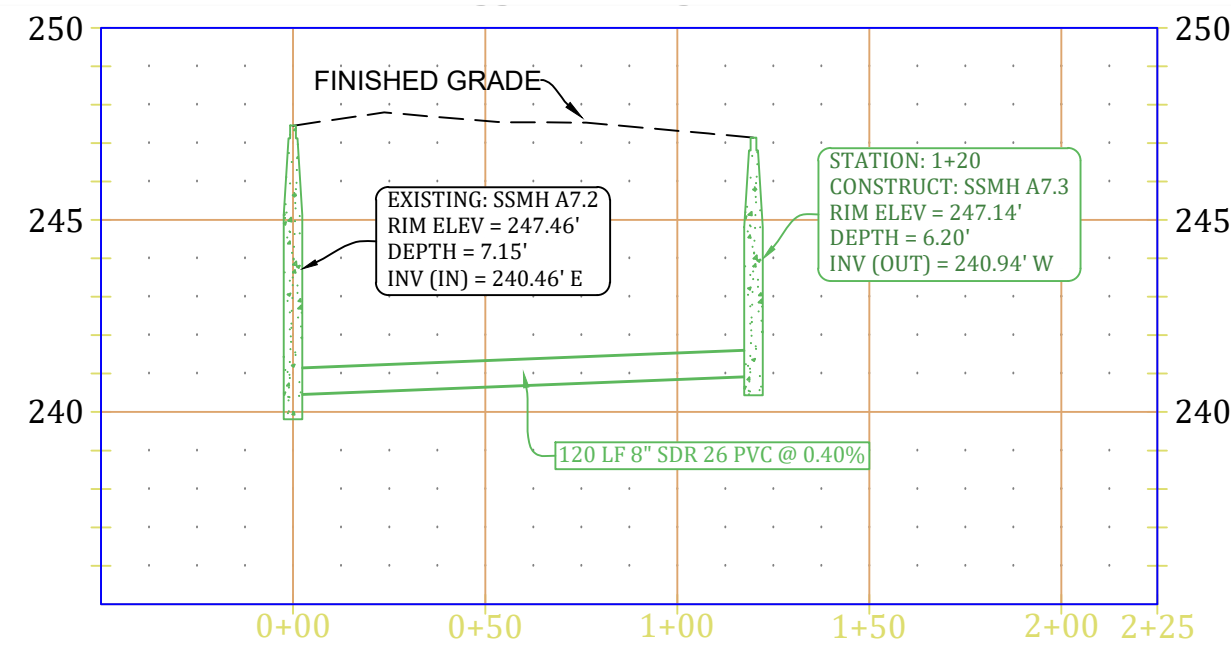
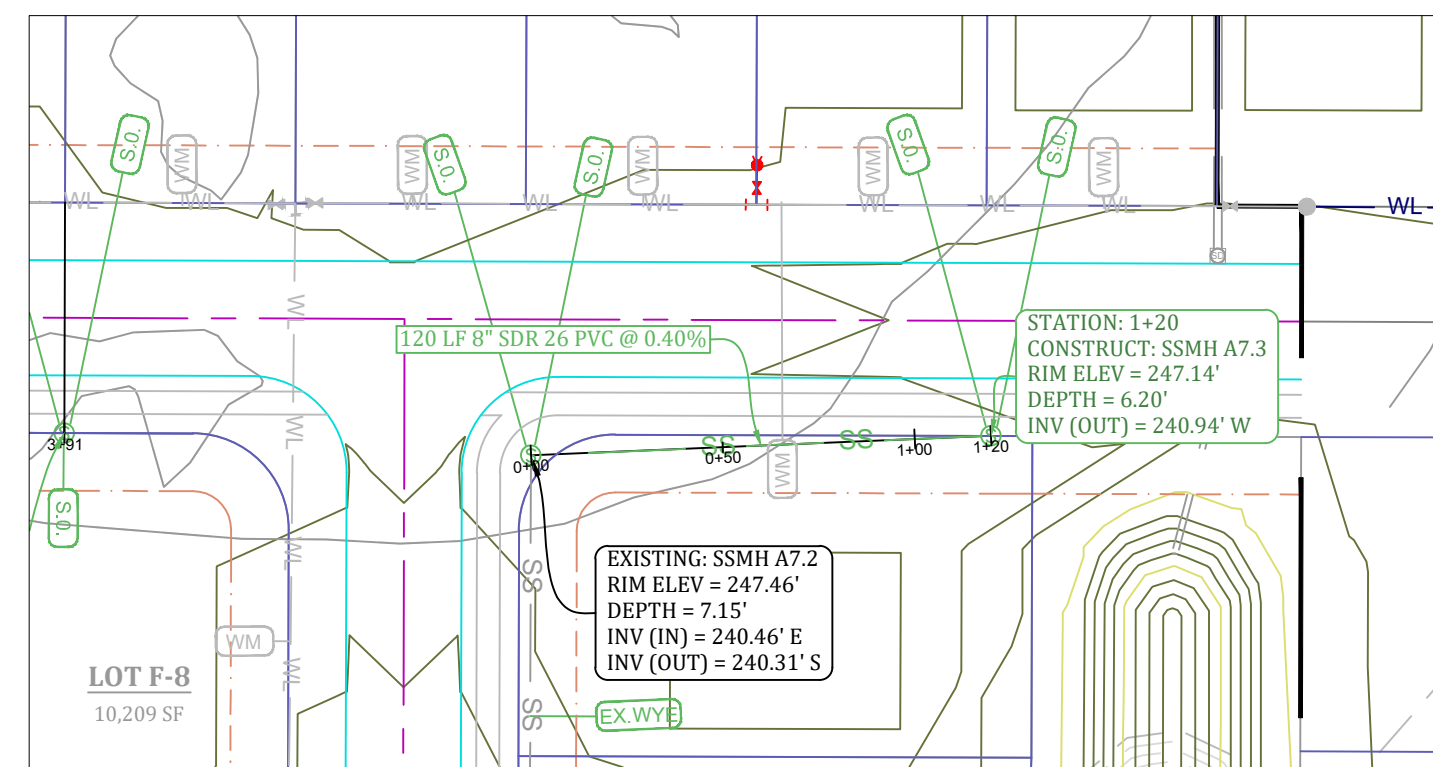
SEWER LINE A4.2.1 --> B1 PLAN/PROFILE



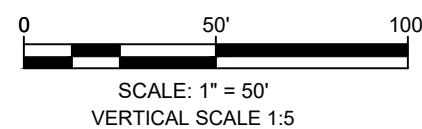
SEWER LINE B1 --> B4 PLAN/PROFILE



SEWER LINE B1 --> B3 PLAN/PROFILE

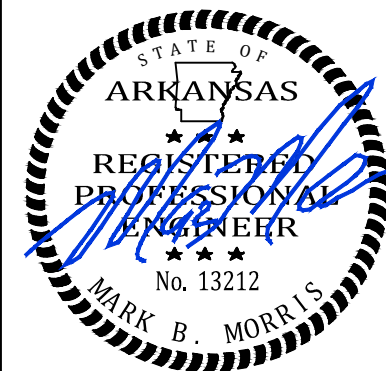


SEWER LINE A7.2 --> A7.3 PLAN/PROFILE



PACIFIC GROVE - PHASE 2

SEWER PLAN & PROFILE



REVISIONS		
DATE	BY	DESCRIPTION

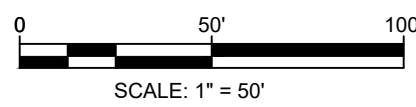
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DATE:	1/2/2023
SCALE:	1"=50'

SHEET NUMBER:
SW-2

MARK MORRIS P.E.
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Know what's below.
Call before you dig.



PACIFIC GROVE - PHASE 2

GRADING & DRAINAGE PLAN



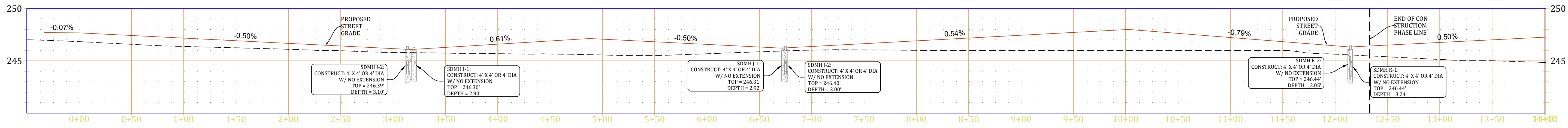
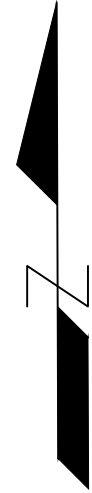
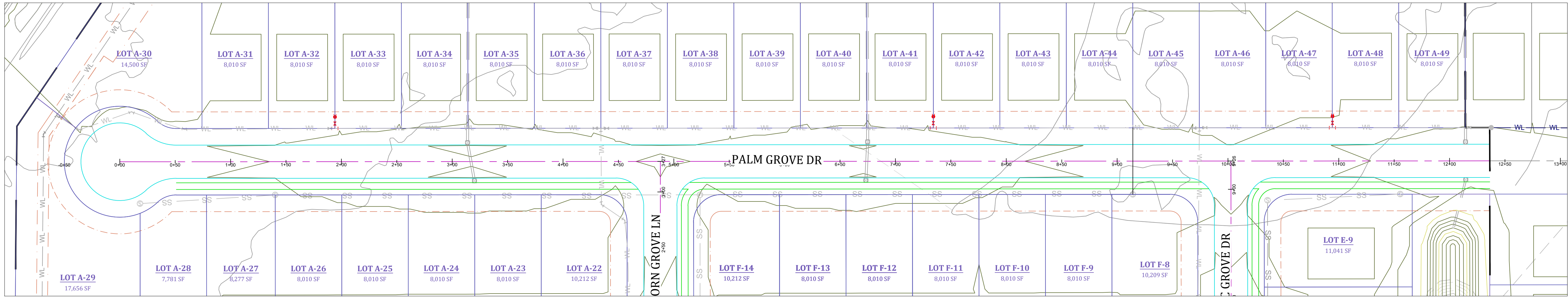
REVISIONS		
DATE	BY	DESCRIPTION

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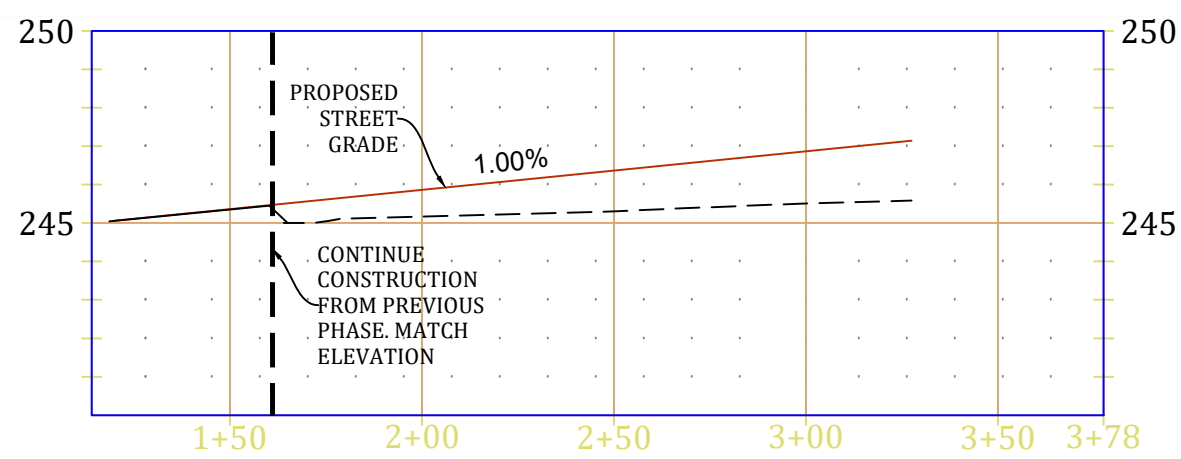
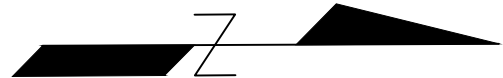
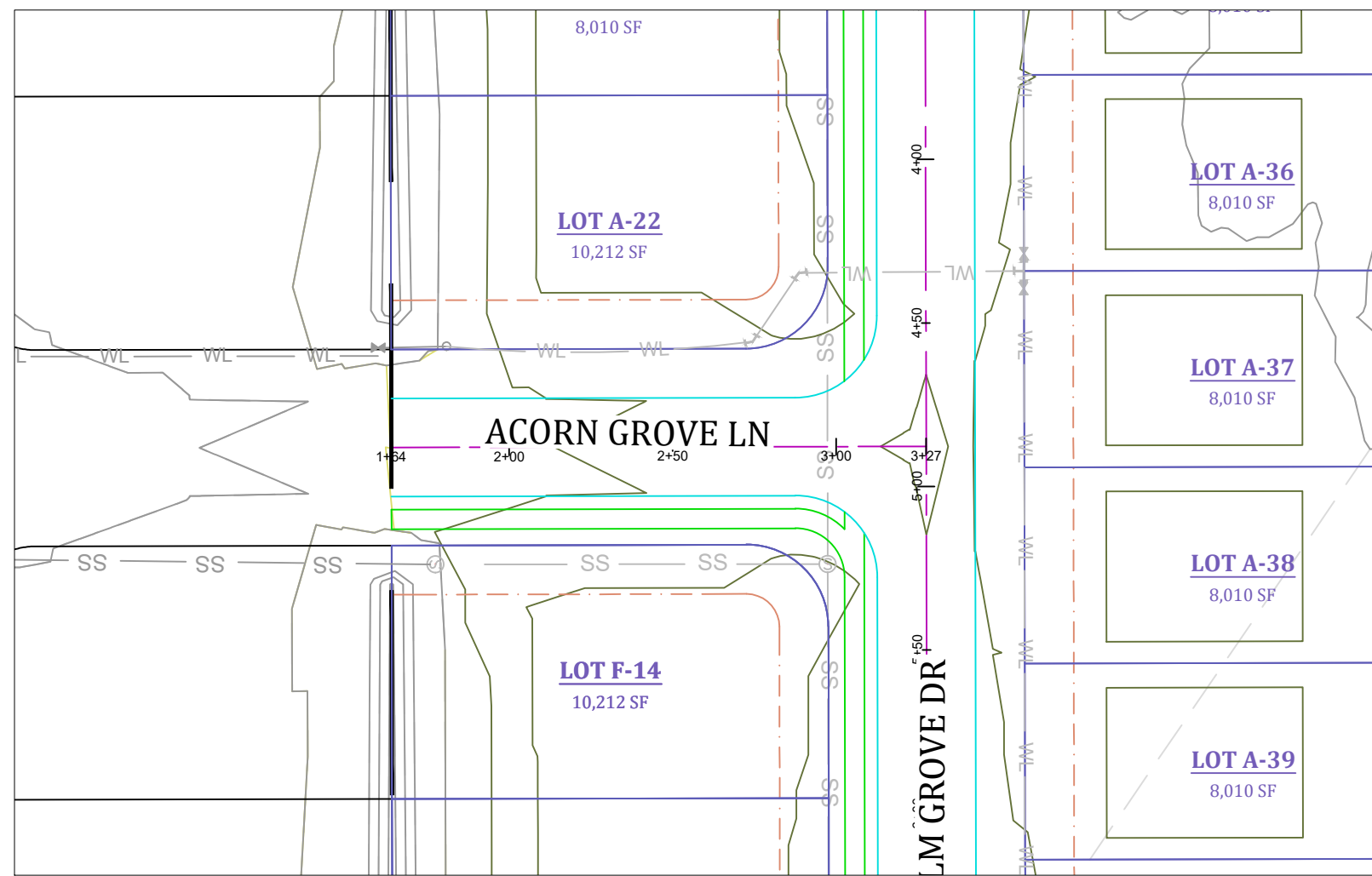
SHEET NUMBER:
GR-1

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PH: 1-870-919-7700
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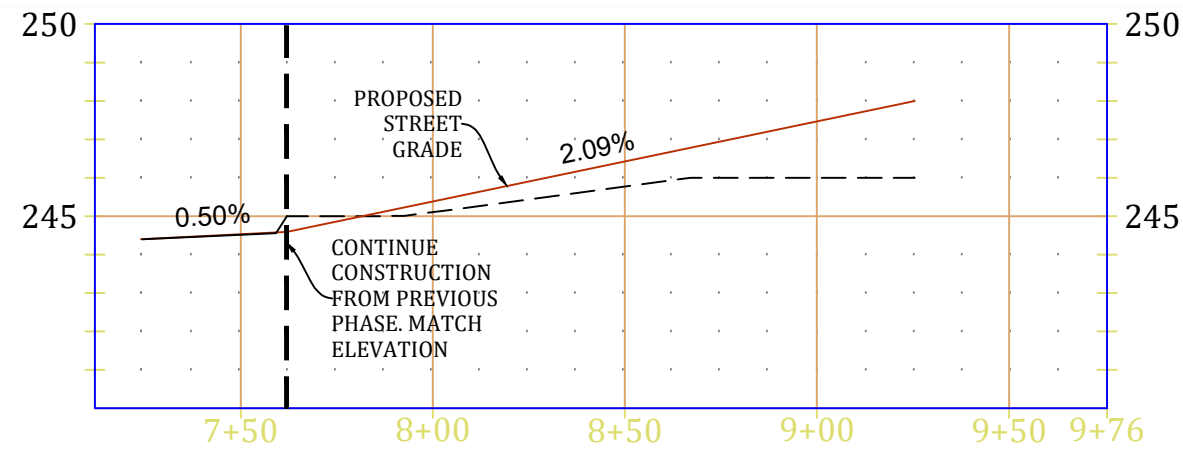
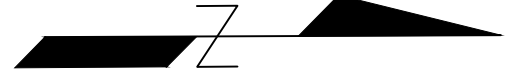
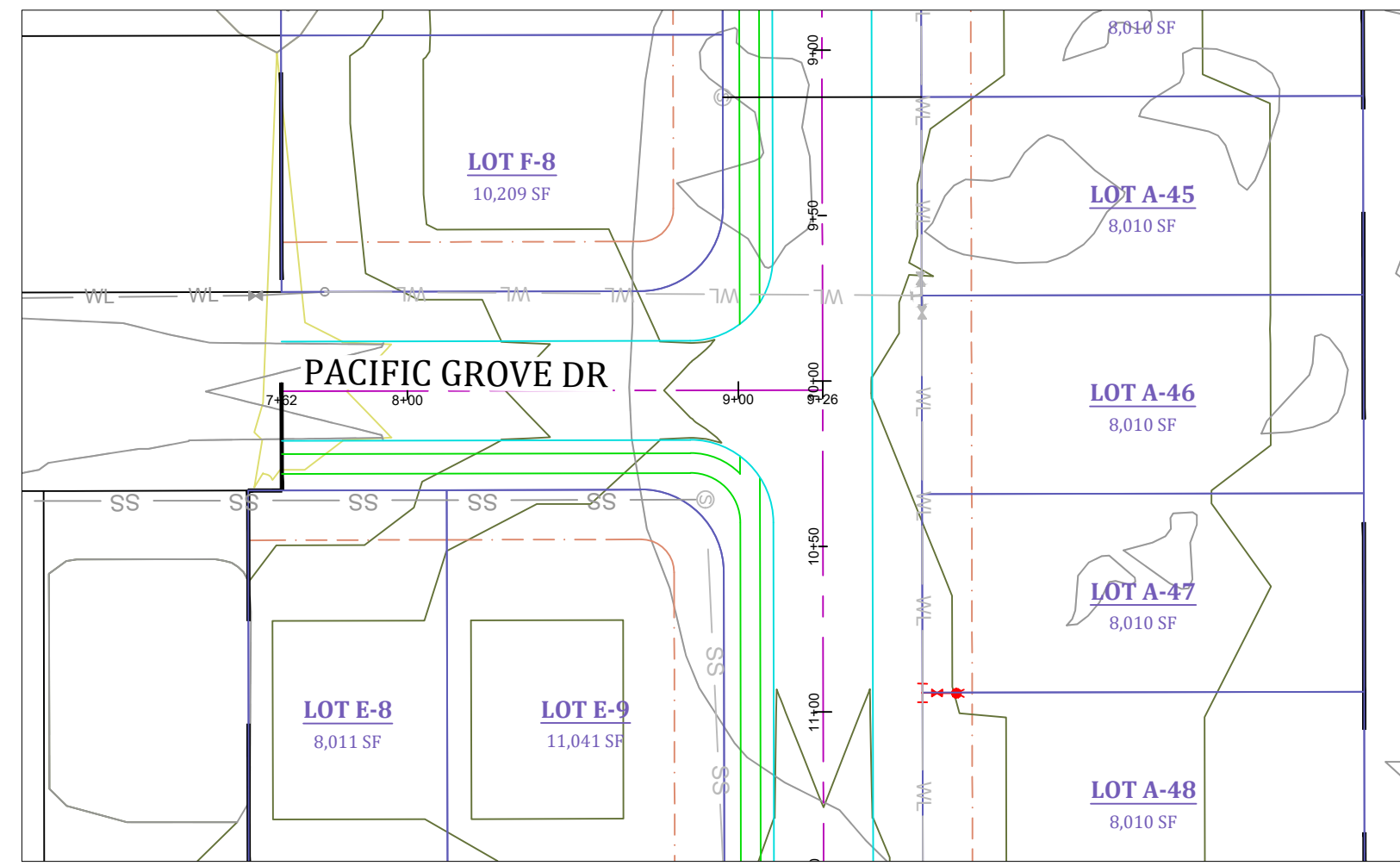
MARK MORRIS



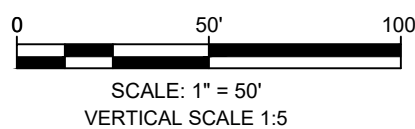
PALM GROVE DRIVE - PLAN AND PROFILE



ACORN GROVE LANE - PLAN AND PROFILE



PACIFIC GROVE DRIVE - PLAN AND PROFILE



PACIFIC GROVE - PHASE 2

STREET PLAN & PROFILE



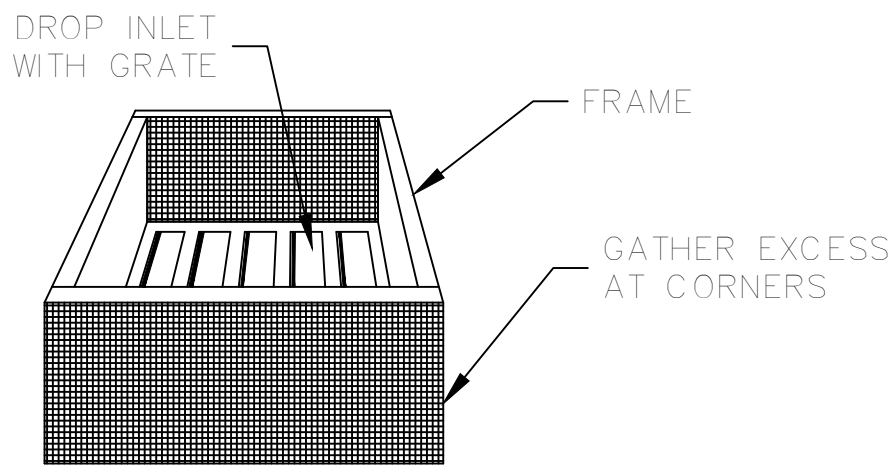
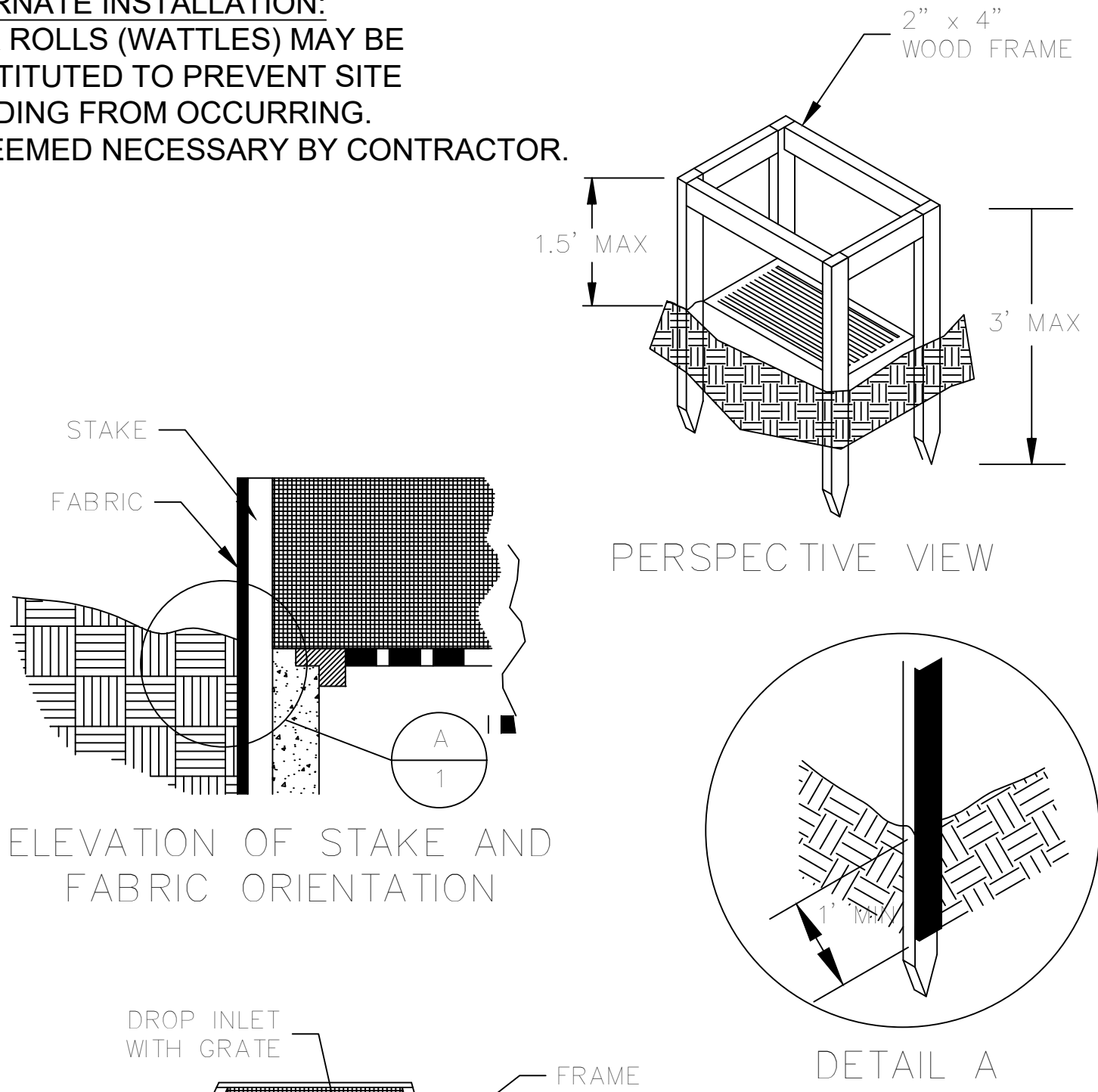
REVISIONS		
DATE	BY	DESCRIPTION

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DATE:	7/24/2023
SCALE:	1"=50'

SHEET NUMBER:

ST-1

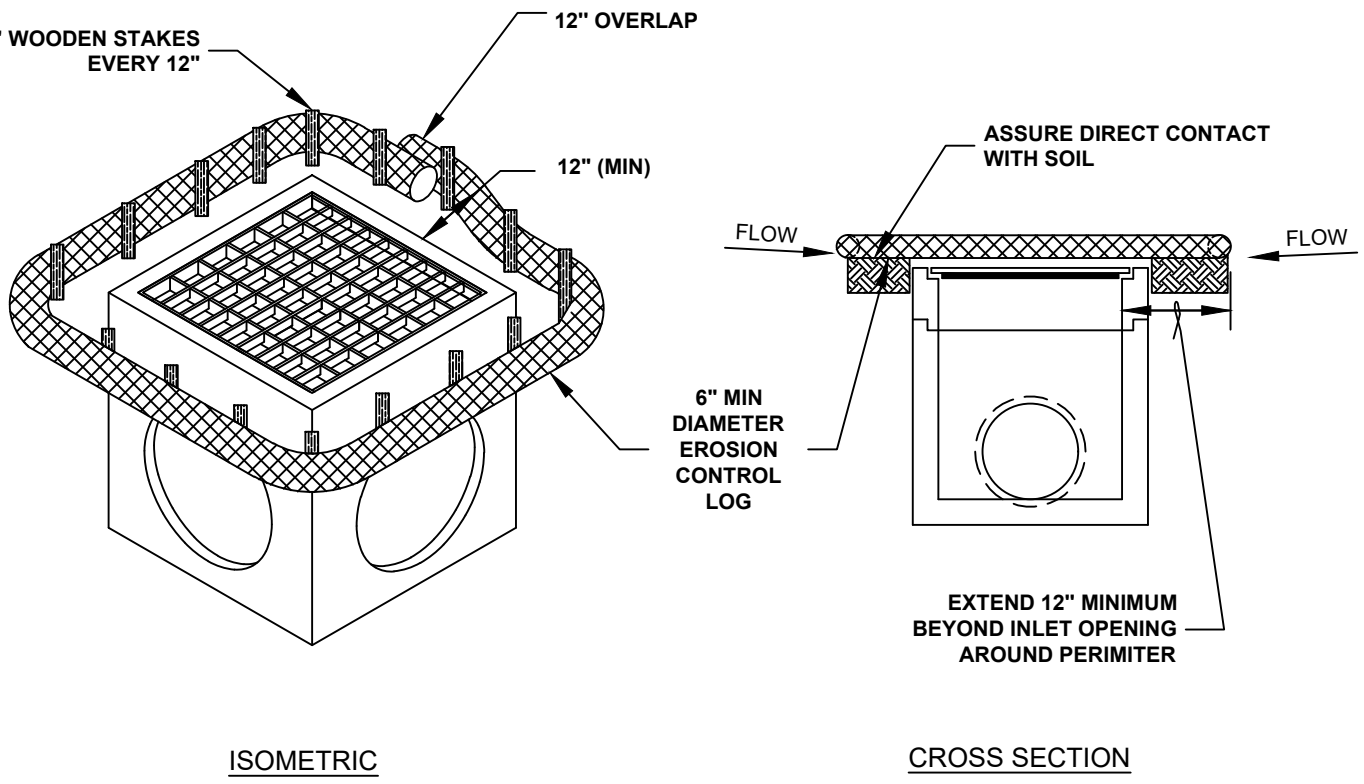
ALTERNATE INSTALLATION:
FIBER ROLLS (WATTLES) MAY BE
SUBSTITUTED TO PREVENT SITE
FLOODING FROM OCCURRING.
AS DEEMED NECESSARY BY CONTRACTOR.



PERSPECTIVE VIEW

FILTER FABRIC INLET PROTECTION

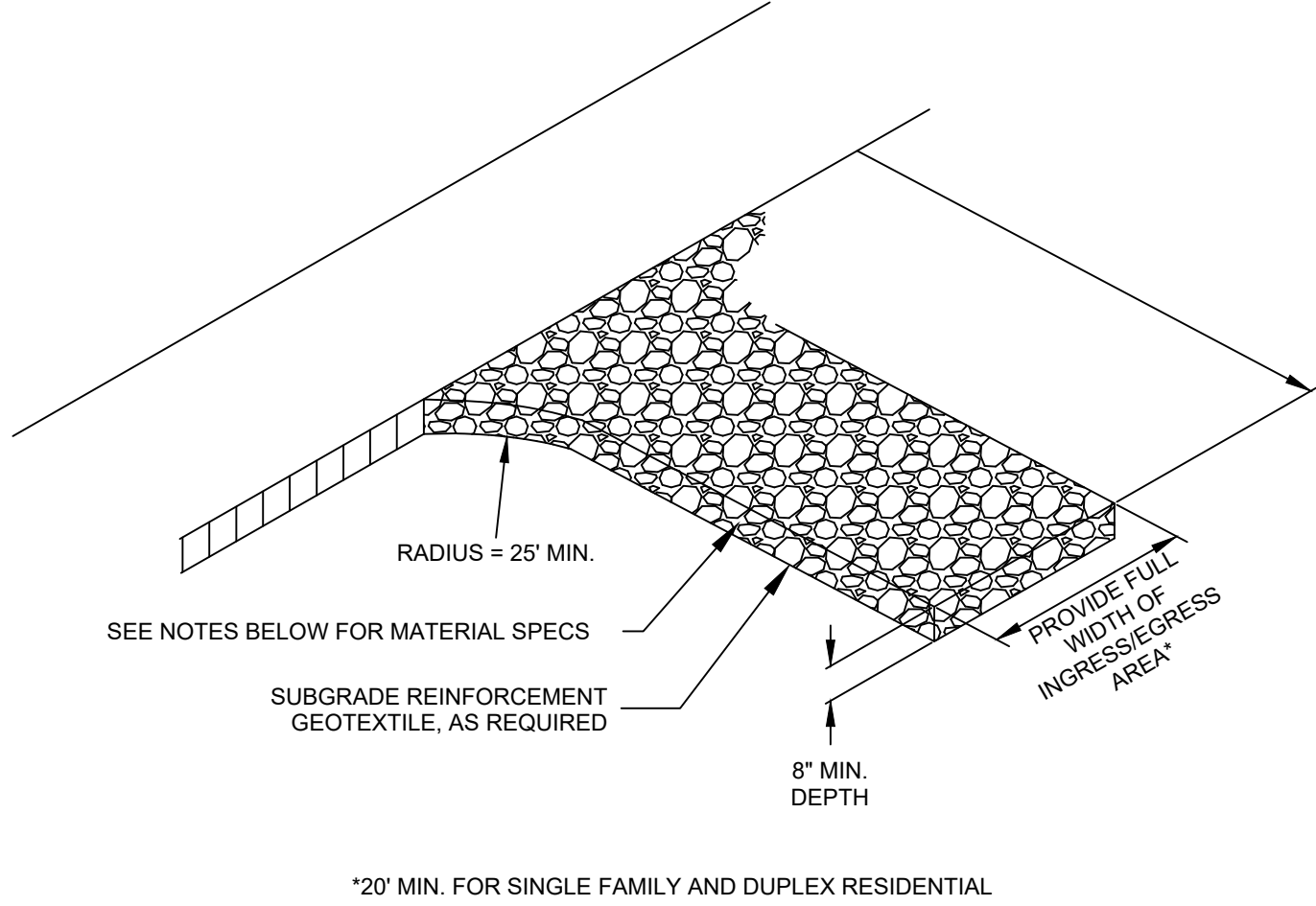
NOT TO SCALE



- NOTES:
1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
 2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 50% CAPACITY.
 3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
 4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

FIBER ROLL (WATTLE) INLET PROTECTION

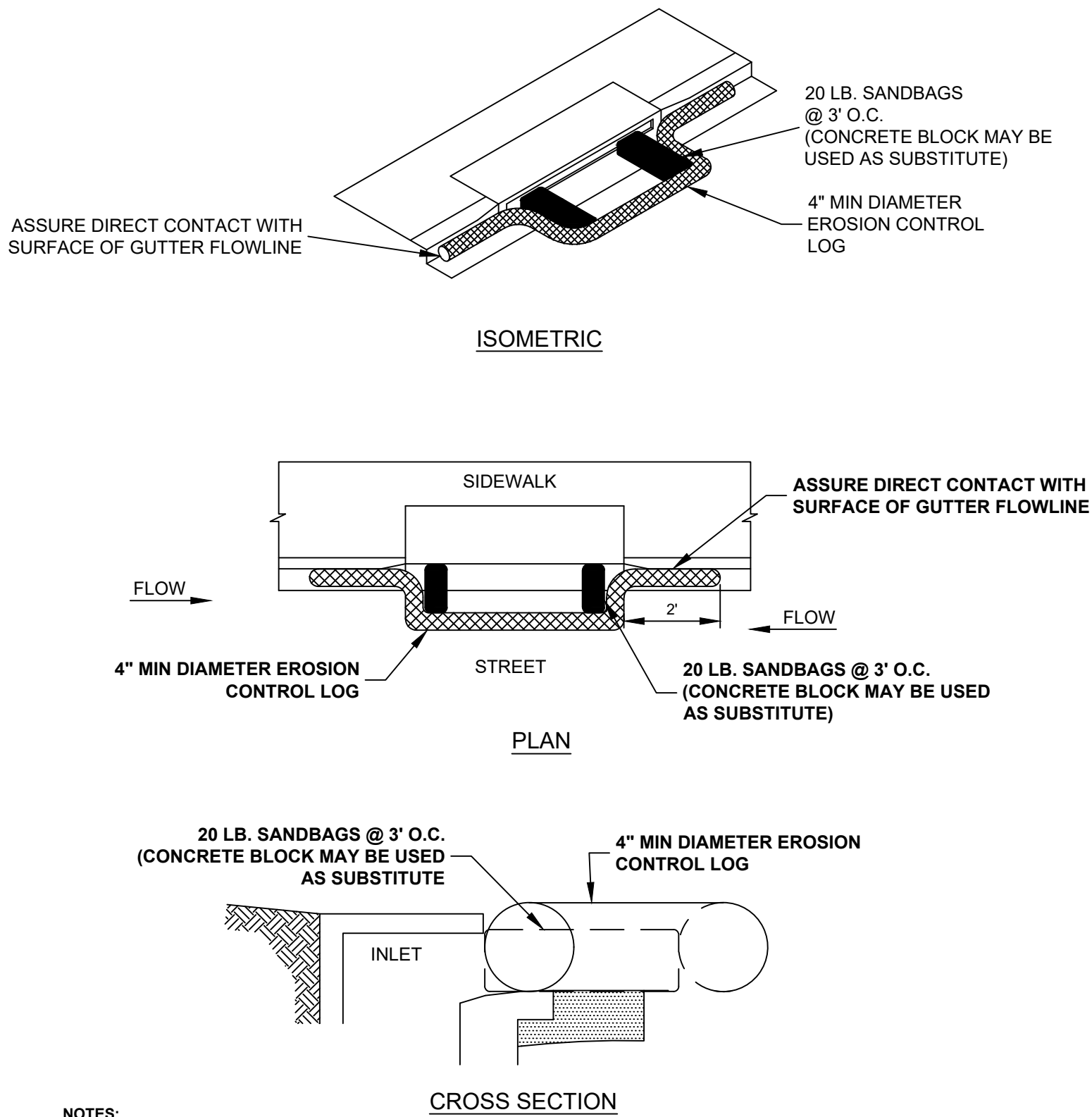
NOT TO SCALE



- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 4. WHERE RUNOFF CONTAINING SEDIMENT-LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
 5. DIMENSIONS:
SINGLE FAMILY AND DUPLEX
20' LONG BY 20' WIDE, 8" DEEP OF 3/4" MINUS CLEAN ROCK.
COMMERCIAL
50' LONG BY 20' WIDE, 3-6" DEEP CLEAN ROCK. GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

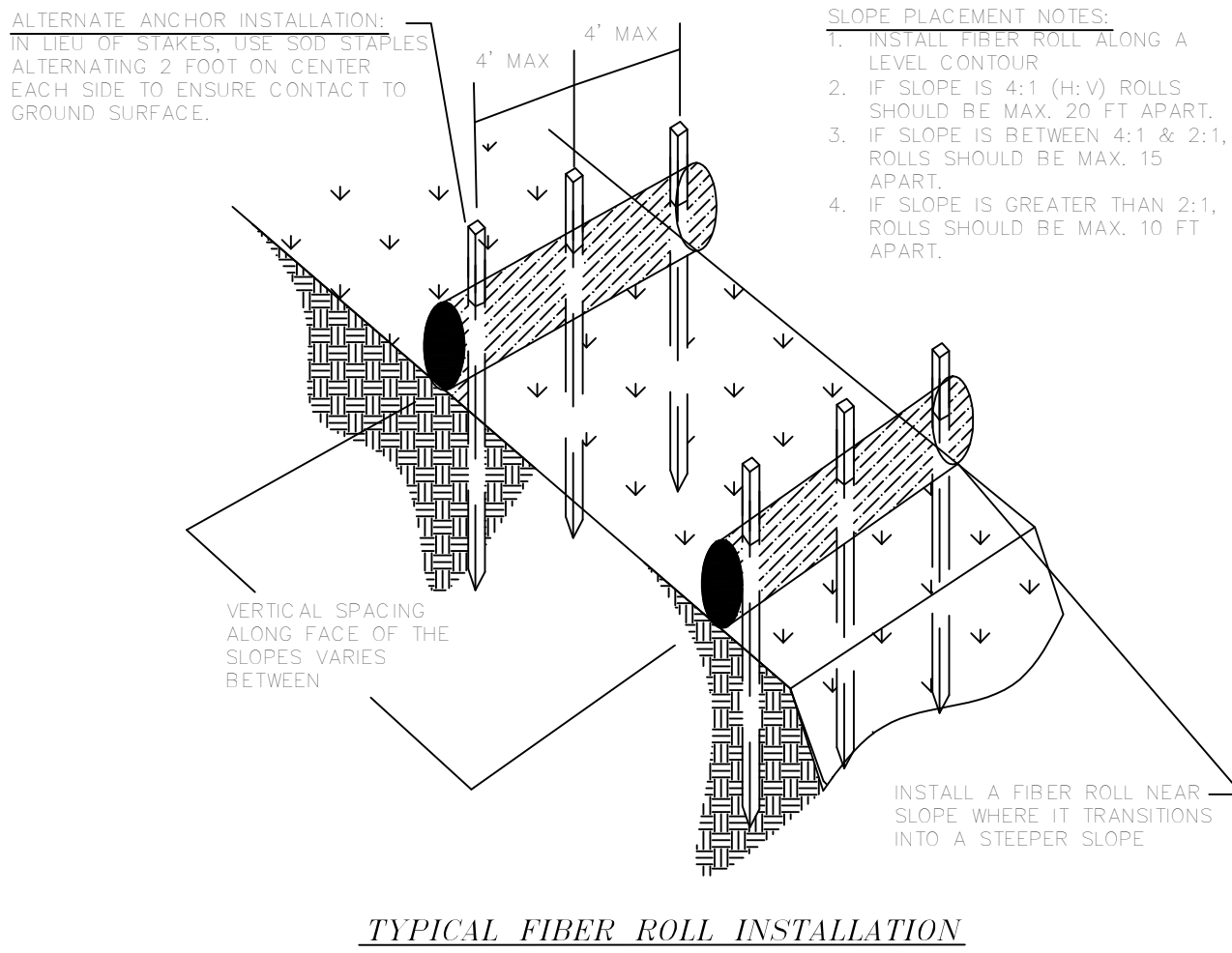
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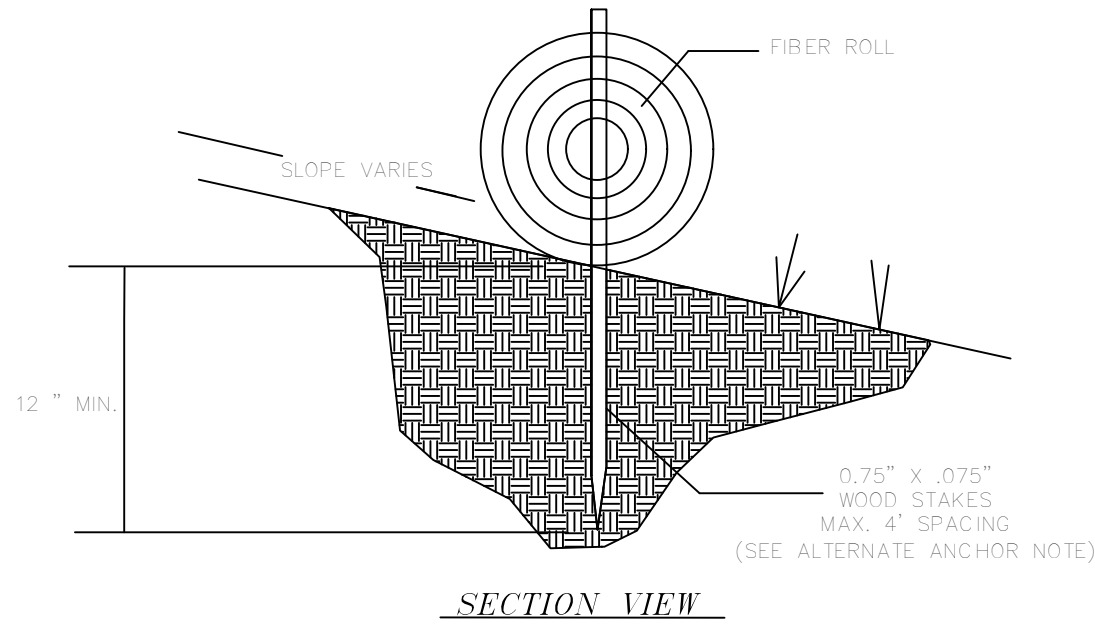
- NOTES:
1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
 2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 50% CAPACITY.
 3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
 4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

FIBER ROLL (WATTLE) CURB INLET PROTECTION

NOT TO SCALE

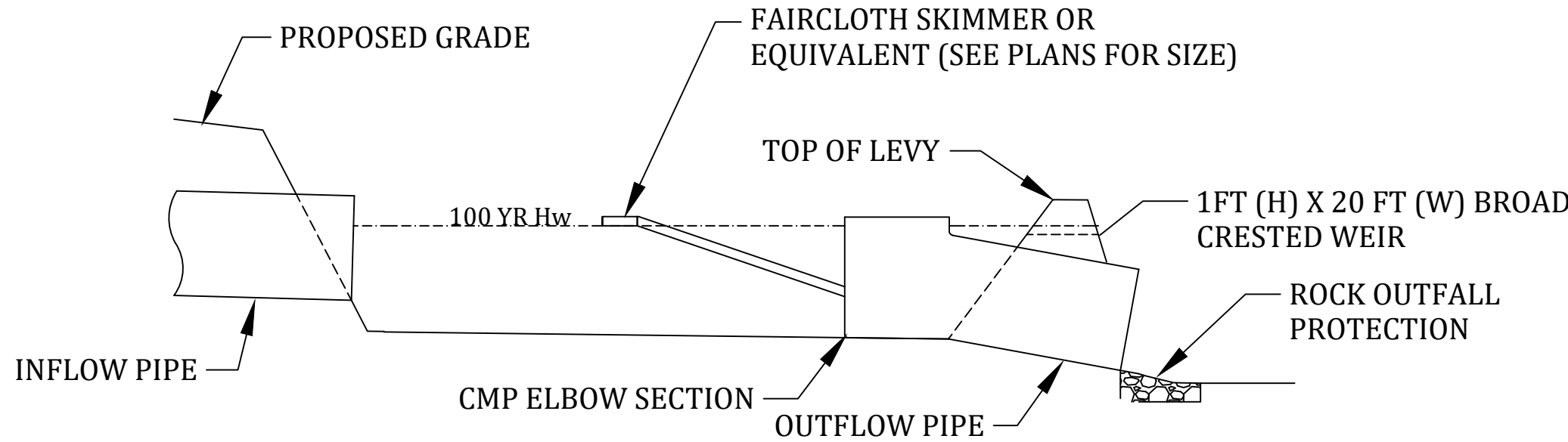


TYPICAL FIBER ROLL INSTALLATION



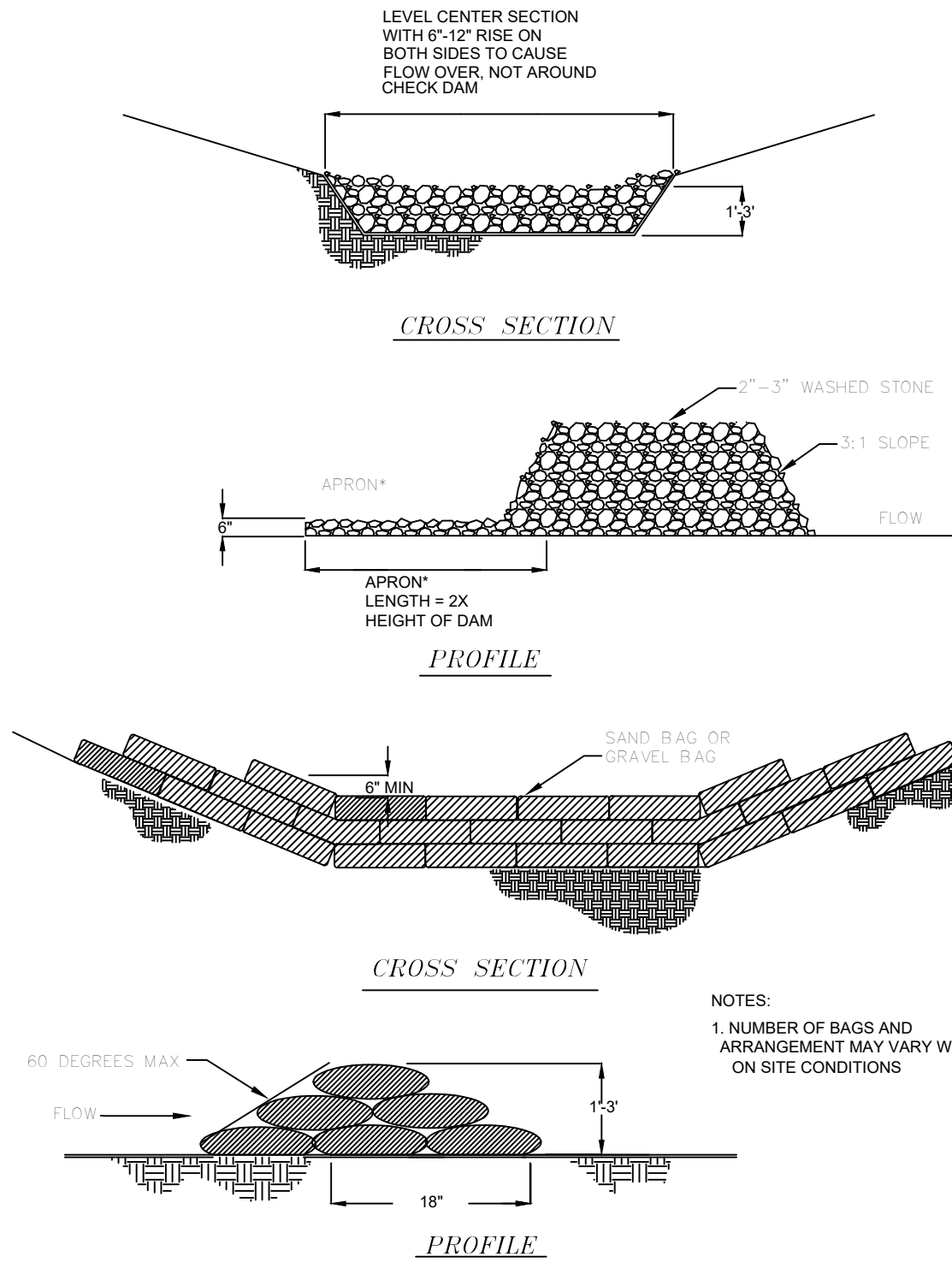
FIBER ROLLS AND WATTLES

NOT TO SCALE



SEDIMENT BASIN w/ FAIRCLOTH SKIMMER

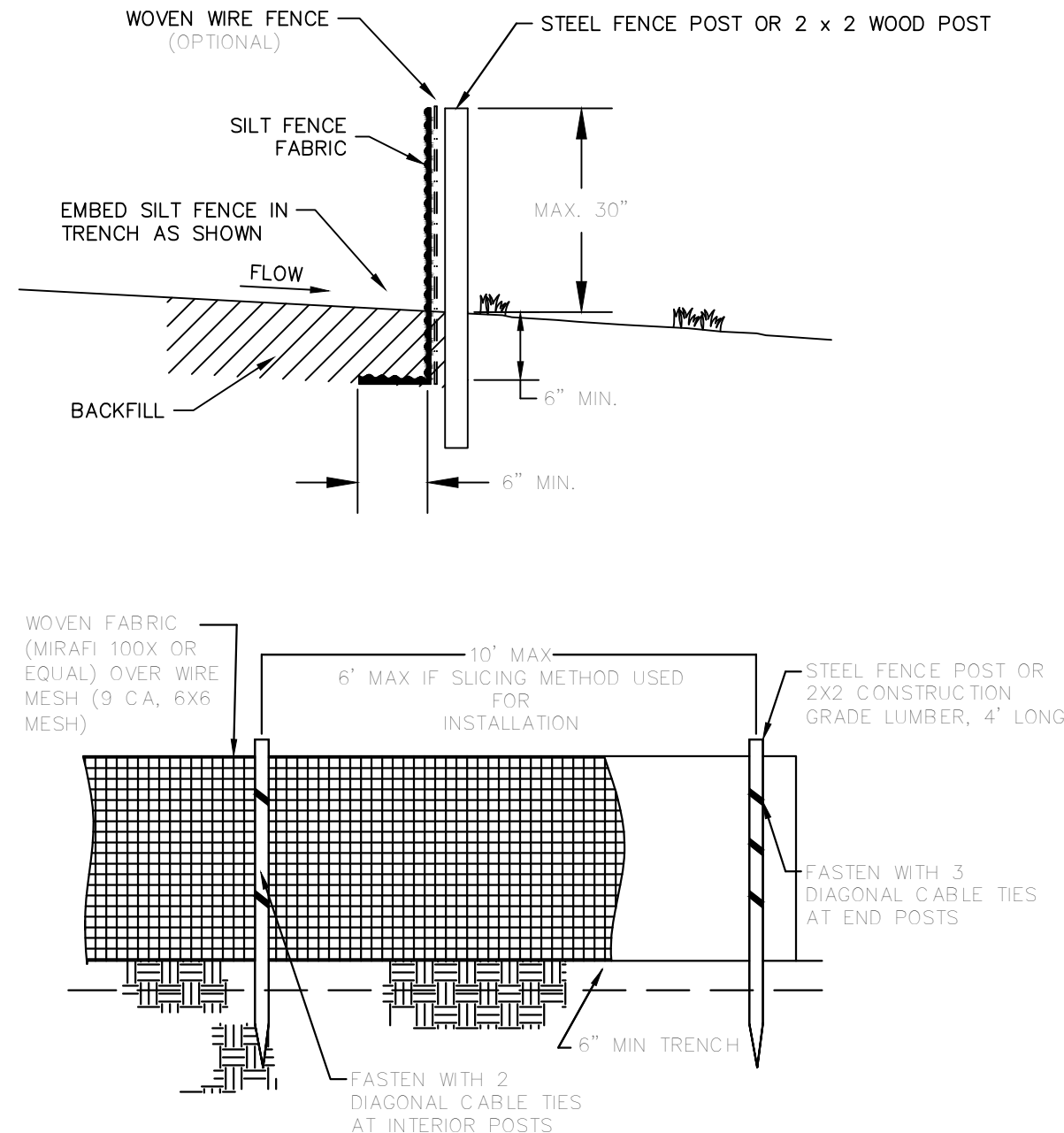
NOT TO SCALE



- NOTES:
1. NUMBER OF BAGS AND ARRANGEMENT MAY VARY WITH ON SITE CONDITIONS

DITCH CHECKS (STONE & SAND BAG)

NOT TO SCALE



- NOTES:
1. PLACE SILT FENCE AT DOWNSLOPE LIMIT OF AREA TO BE GRADED.
 2. SILT FENCE SHALL BE PLACED ALONG A LEVEL CONTOUR.
 3. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
 4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
 5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES 50% CAPACITY.
 8. AT EACH END OF SILT FENCE, TURN FENCE UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES 18 INCHES.

SILT FENCE

NOT TO SCALE

PACIFIC GROVE - PHASE 2

EROSION CONTROL DETAILS



REVISIONS		
DATE	BY	DESCRIPTION

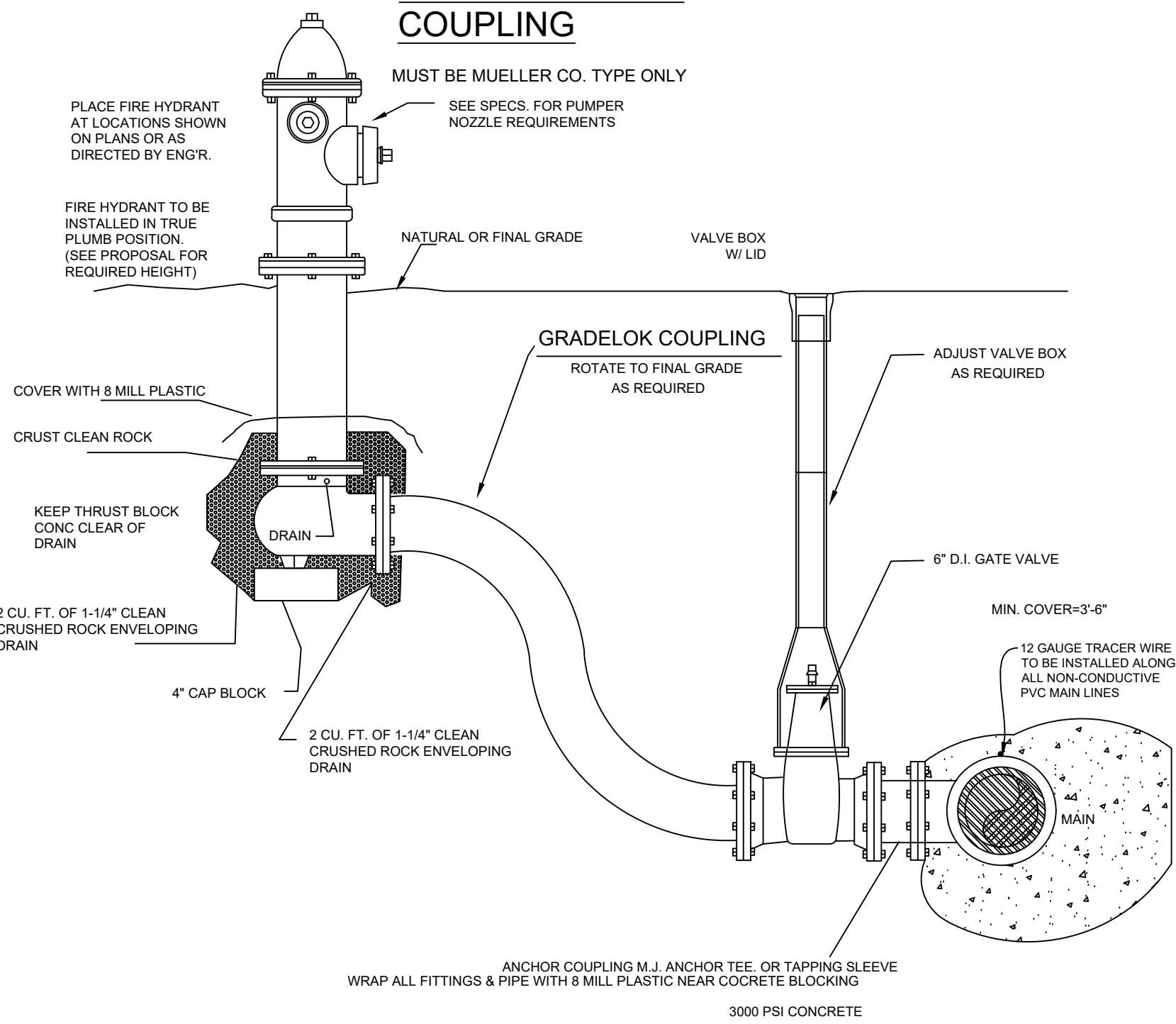
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DRAWN BY:		
DATE:		
SCALE:		1"=7'

SHEET NUMBER:
DT-1

MARK MORRIS P.E.
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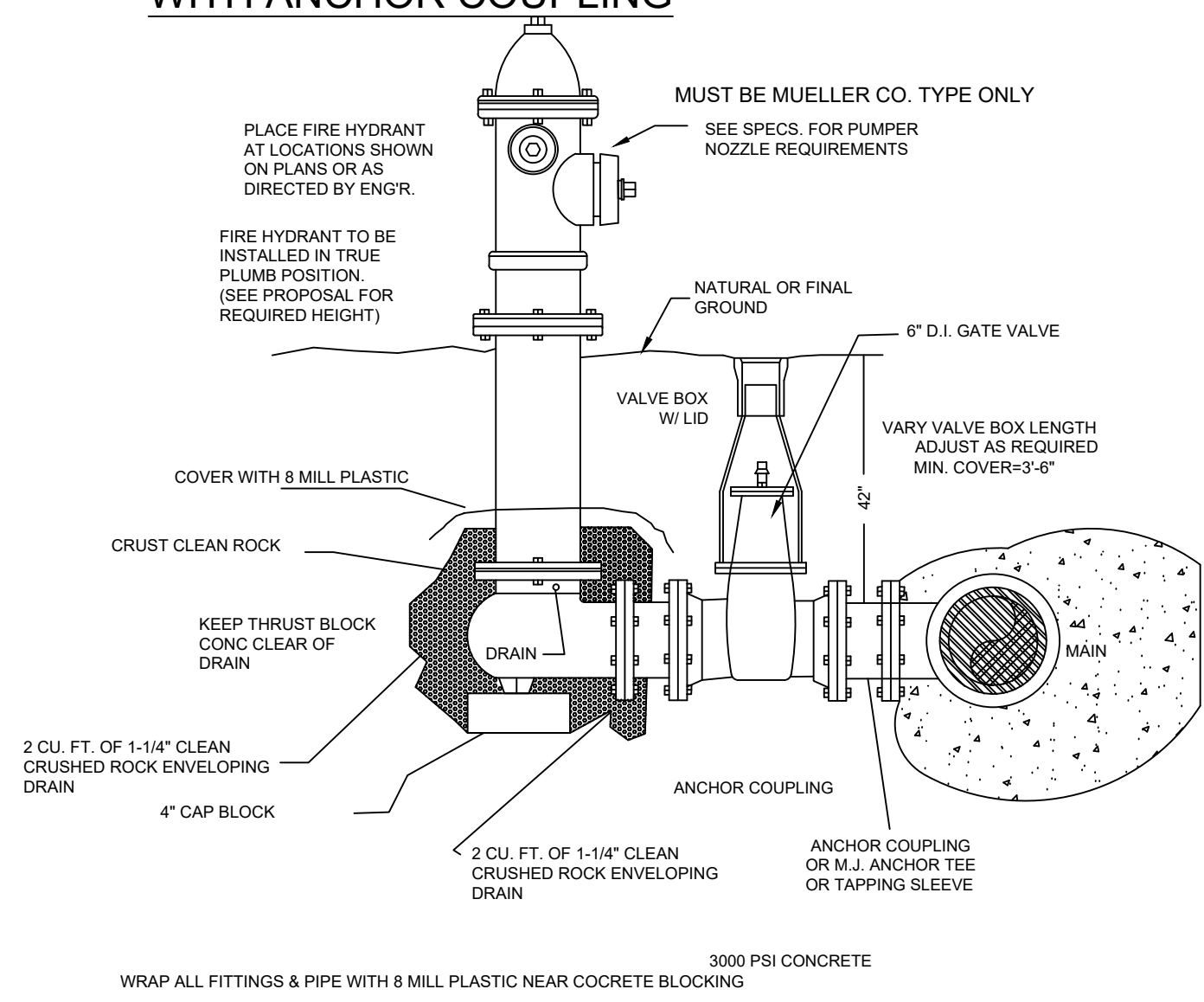
MARK MORRIS

FIRE HYDRANT DETAIL
WITH GRADELOK
COUPLING

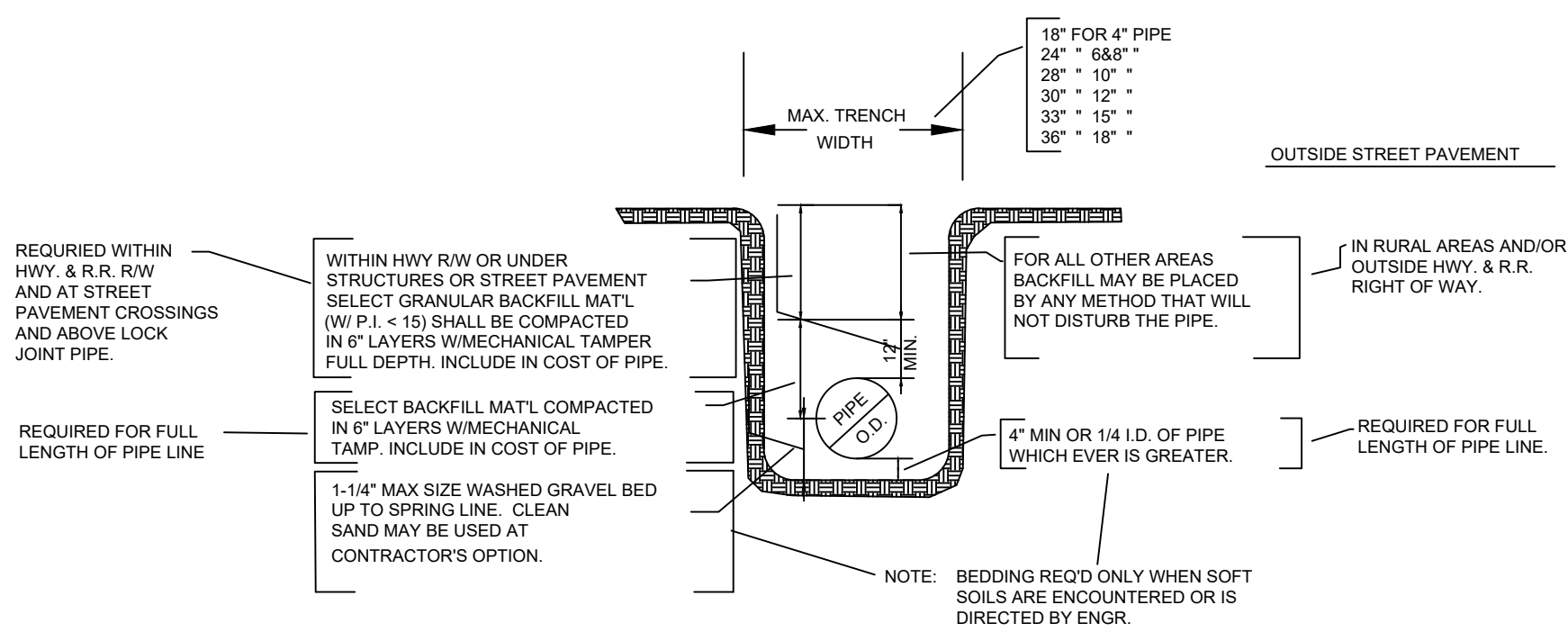


TYPICAL FIRE HYDRANT LOCATION
ALONG HWY. RIGHT-OF-WAY

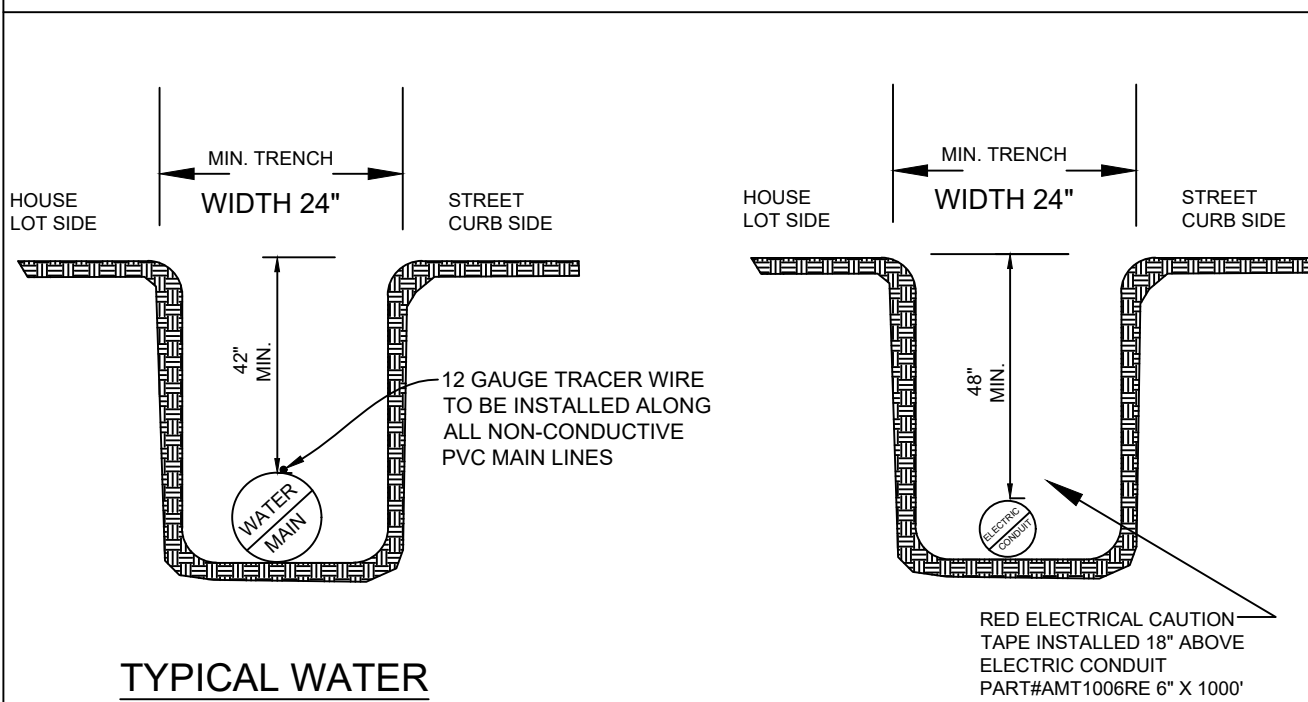
FIRE HYDRANT DETAIL
WITH ANCHOR COUPLING



TYPICAL FIRE HYDRANT
LOCATION

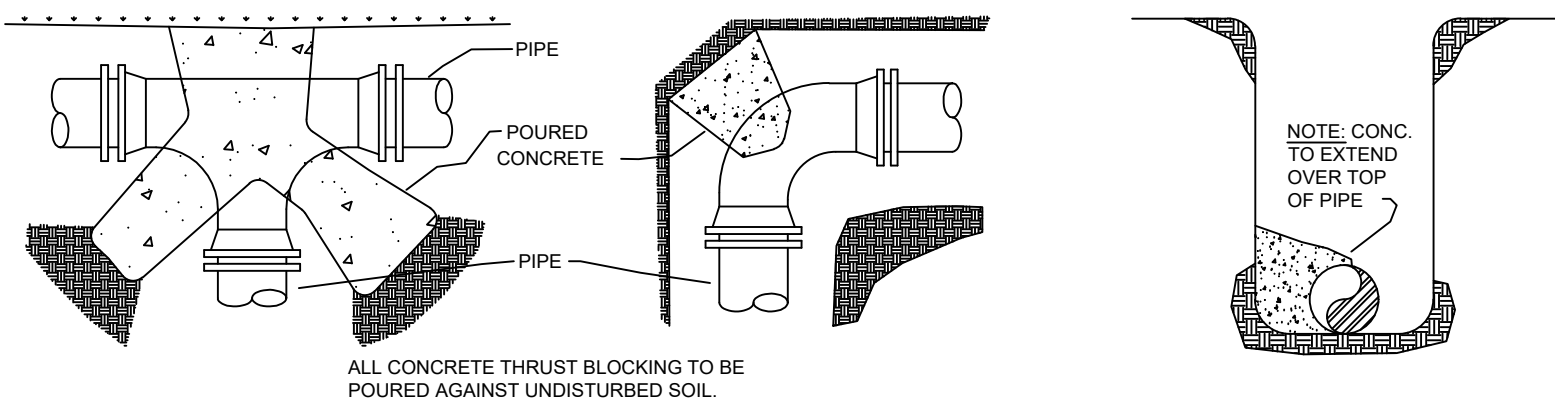


TYPICAL WATER PIPE BEDDING
AND BACKFILL DETAIL



TYPICAL WATER
TRENCH DETAIL

TYPICAL ELECTRIC
TRENCH DETAIL



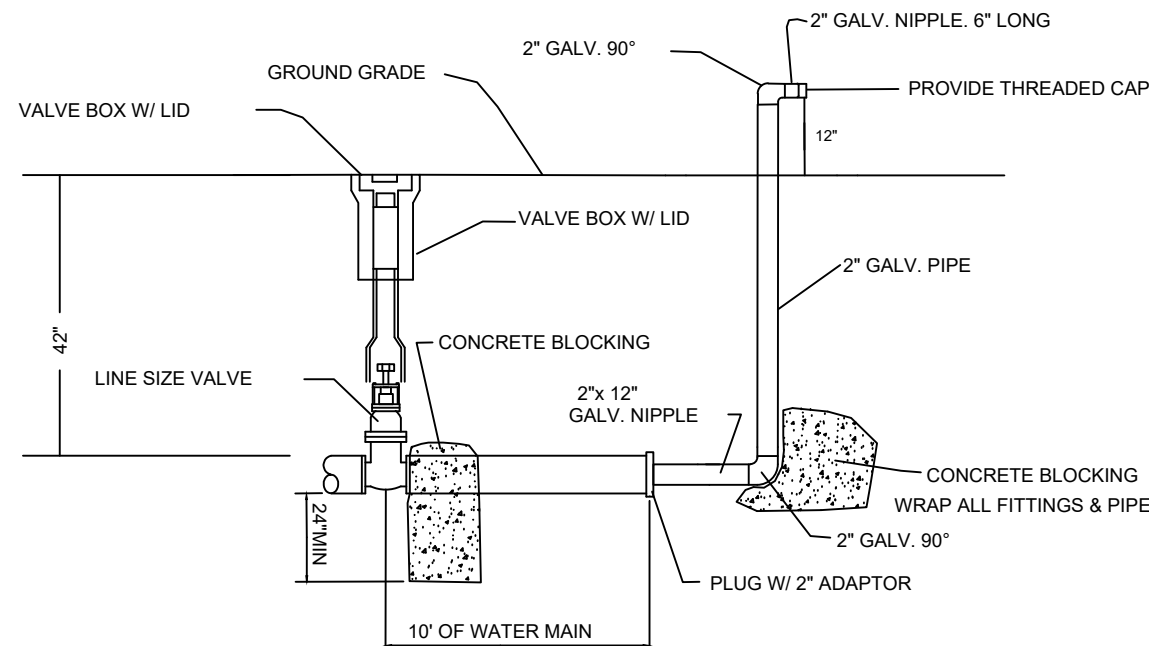
THRUST BLOCK DETAILS

NOTES:

1. ALL BLOCKING SHALL BE AGAINST UNDISTURBED HAND DUG SOIL.
2. WHERE SOIL CONDITIONS MAKE IT NECESSARY TO POUR CONCRETE BLOCKING OVER JOINTS, THE ENDS OF THE ADJACENT PIPES MUST HAVE A BRACE BLOCK TO RESIST MOVEMENT OF THESE JOINTS.
3. ALL FITTINGS & PIPE SHALL BE COVERED WITH 8 MILL PLASTIC WHEN BLOCKING TO PREVENT BONDING OF CONCRETE.
4. WHERE SHEAR IS HIGH PROPER REINFORCING MUST BE INSTALLED INTO THE BLOCKING AS DIRECTED BY ENGINEER.
5. COVER SHALL BE A MINIMUM OF 3\"/>

WATERLINE PIPE BEND THRUST BLOCK AREA		
SIZE & BEND DEGREE	STATIC THRUST (LB)	BLOCKING AREA (FT²)
4" - 22 ½°	1103	1
4"- 45°	2164	2
4" - 90°/TEE/PLUG	3998	4
6"- 22 1/2°	2482	2.5
6" - 45°	4867	5
6" - 90°/ TEE/PLUG	8997	9
8" - 22 1/2°	4413	4.5
8" - 45°	8656	8.5
8" - 90°/ TEE/PLUG	15994	16

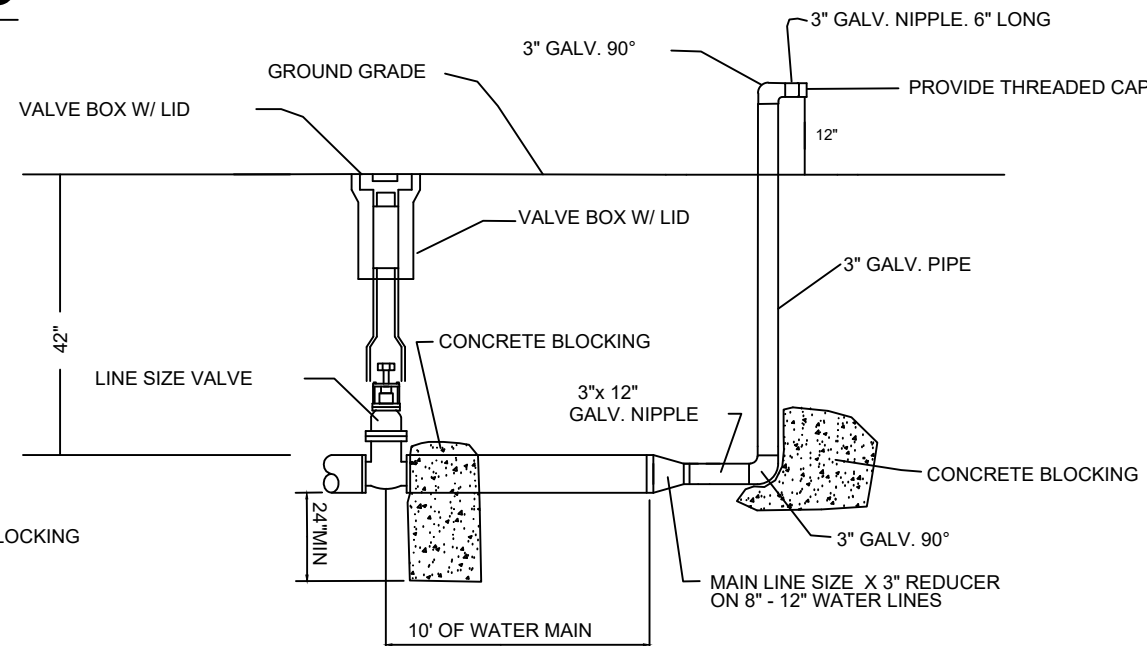
BLOW-OFF ASSEMBLY DETAILS



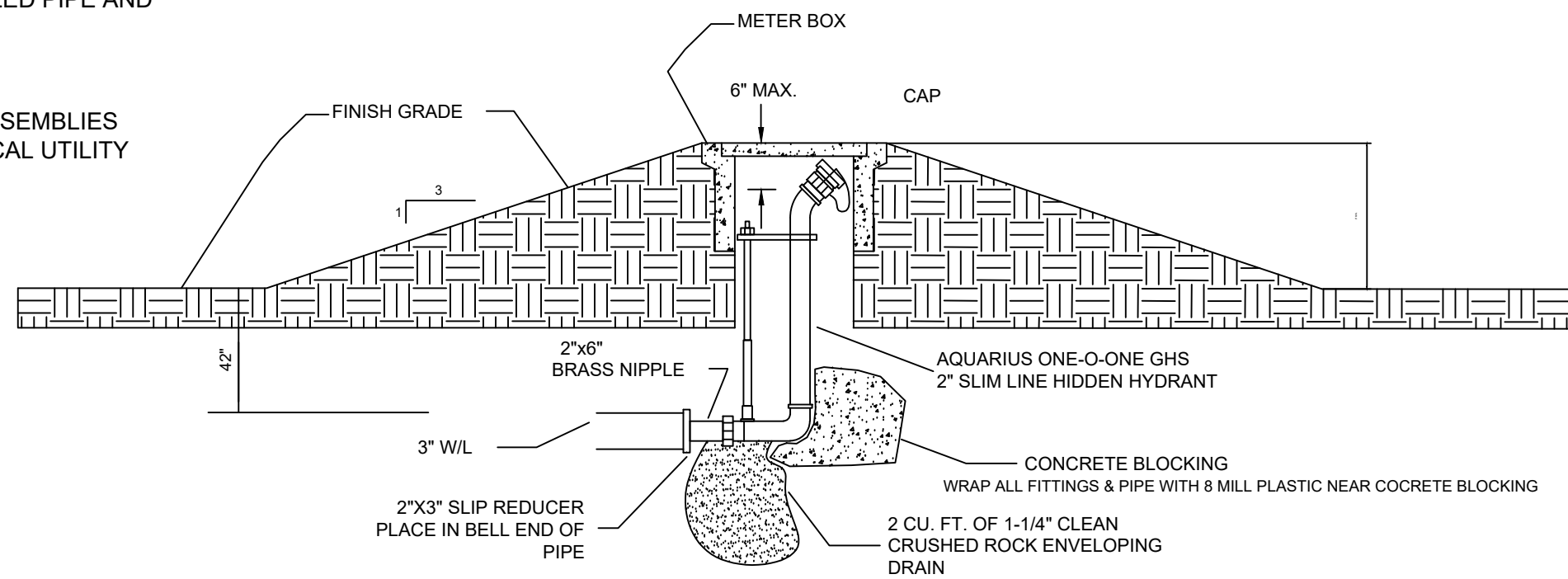
2\"/>

NOTE: ALL 2\", OR 3\" GALVANIZED PIPE AND FITTINGS ARE TO BE SCH 40

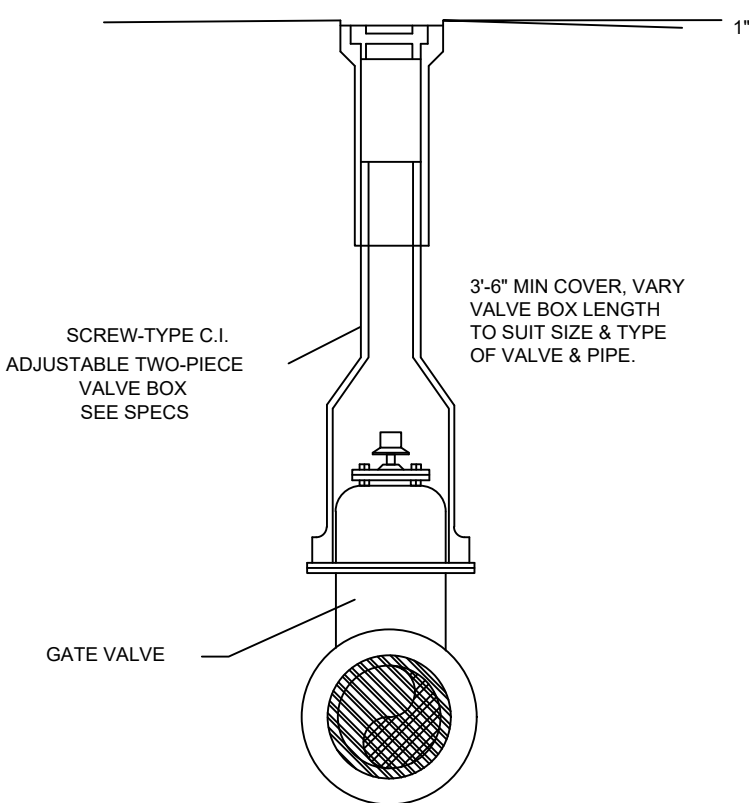
NOTE: OTHER BLOW-OFF ASSEMBLIES MUST BE APPROVED BY LOCAL UTILITY COMPANY



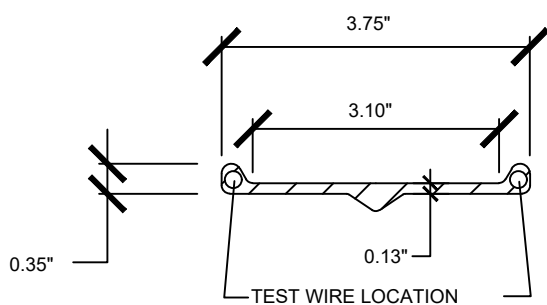
3\"/>



UNDERGROUND WASHOUT ASSEMBLY
FOR COVES AND DEAD END LINES WITH
NO FUTURE EXTENSION

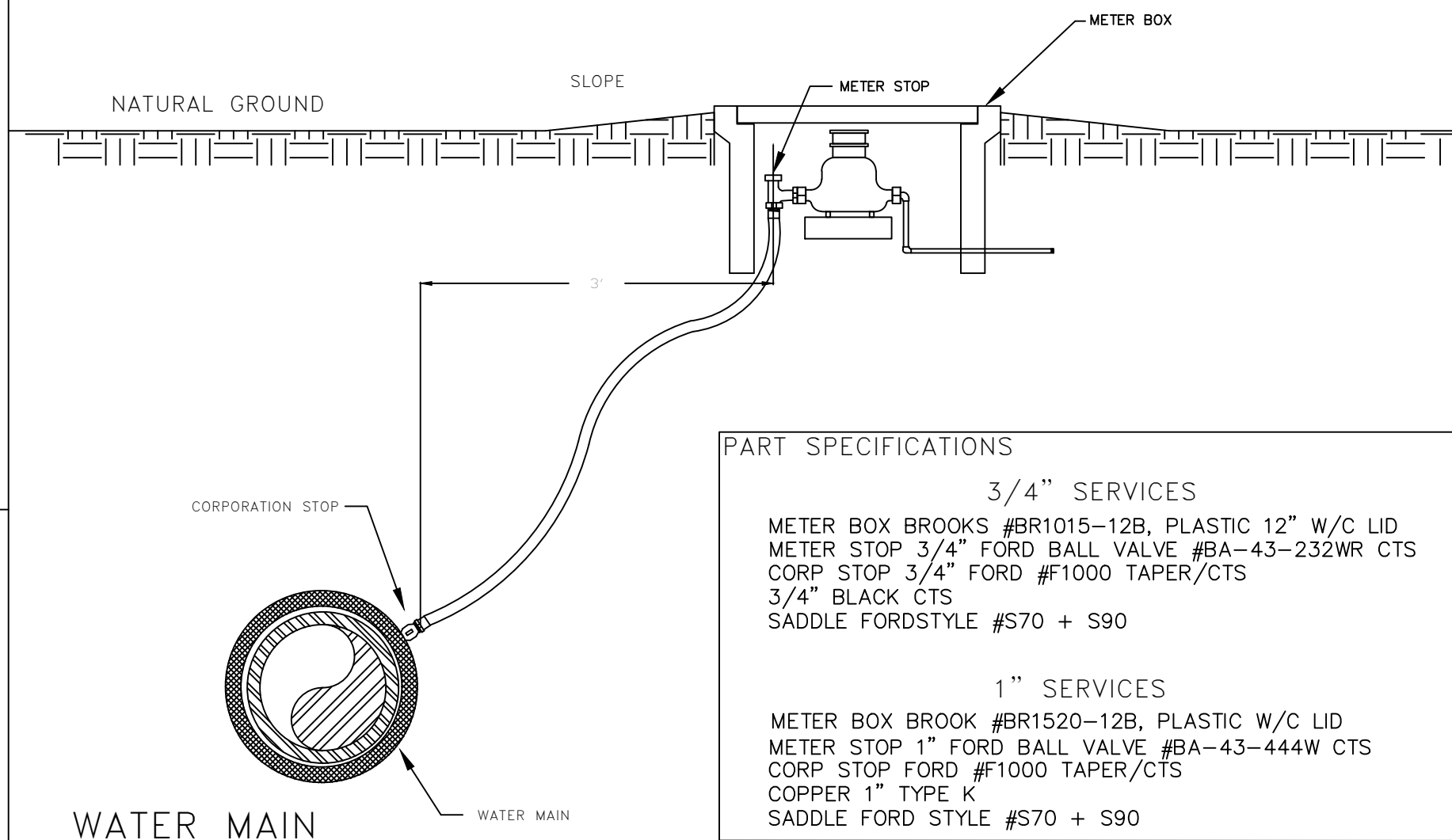


VALVE BOX DETAIL



WATER LINE & FORCE MAIN
MARKER DETAIL

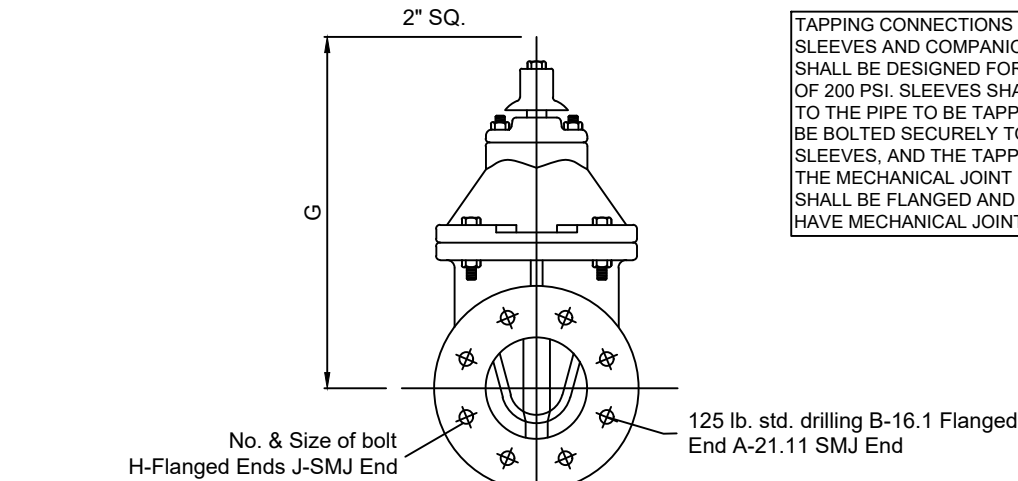
SERVICE CONNECTION AND METER SETTING



PART SPECIFICATIONS

- 3/4\"/>
- 1\"/>

TAPPING CONNECTIONS SHALL CONSIST OF TAPPING SLEEVES AND COMPANION TAPPING VALVES. THEY SHALL BE DESIGNED FOR WORKING WATER PRESSURE OF 200 PSI. SLEEVES SHALL BE FASTENED SECURELY TO THE PIPE TO BE TAPPED. TAPPING VALVES SHALL BE BOLTED SECURELY TO THE FLANGES OF THE SLEEVES, AND THE TAPPING MACHINE CONNECTED TO THE MECHANICAL JOINT END. THE INLET OPENINGS SHALL BE FLANGED AND THE OUTLET OPENINGS SHALL HAVE MECHANICAL JOINT ENDS.



TAPPING SLEEVE
TAPPING VALVE DETAIL

REVISIONS

DATE	BY	DESCRIPTION

DRAWING INFO.

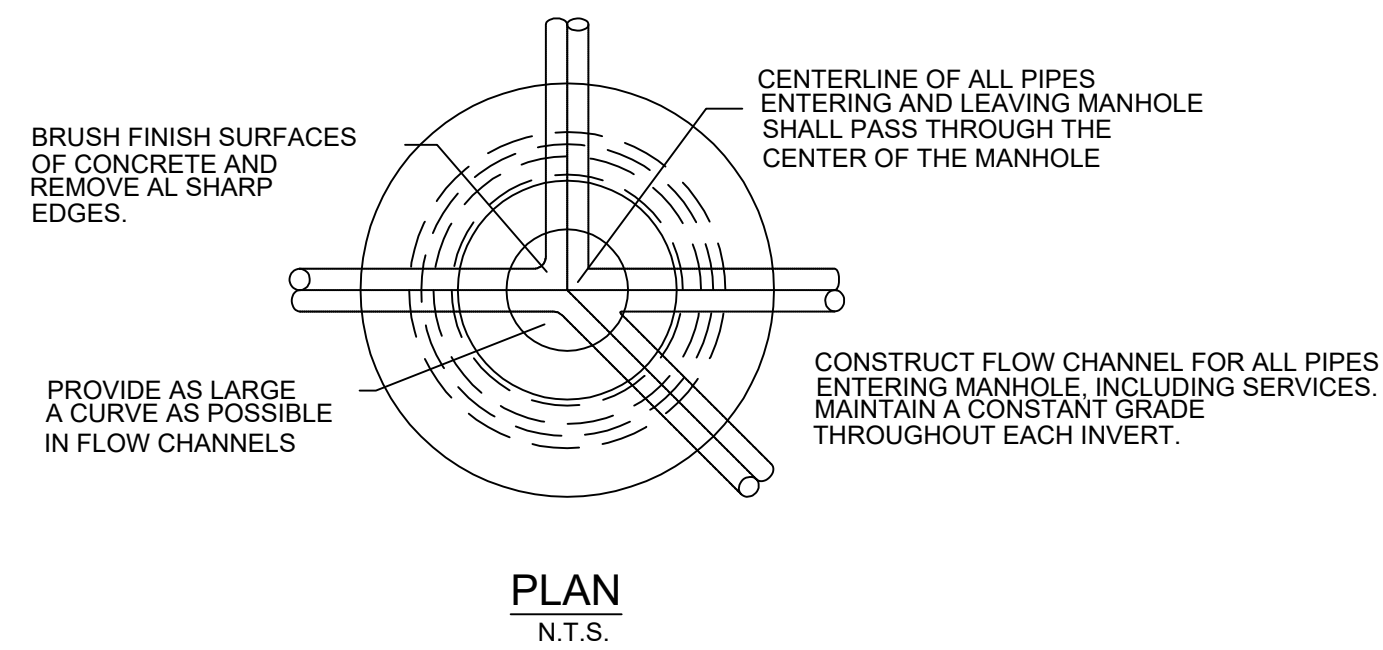
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DATE:	
SCALE:	

SHEET NUMBER:

NOTES TYPICAL TO ALL MANHOLES

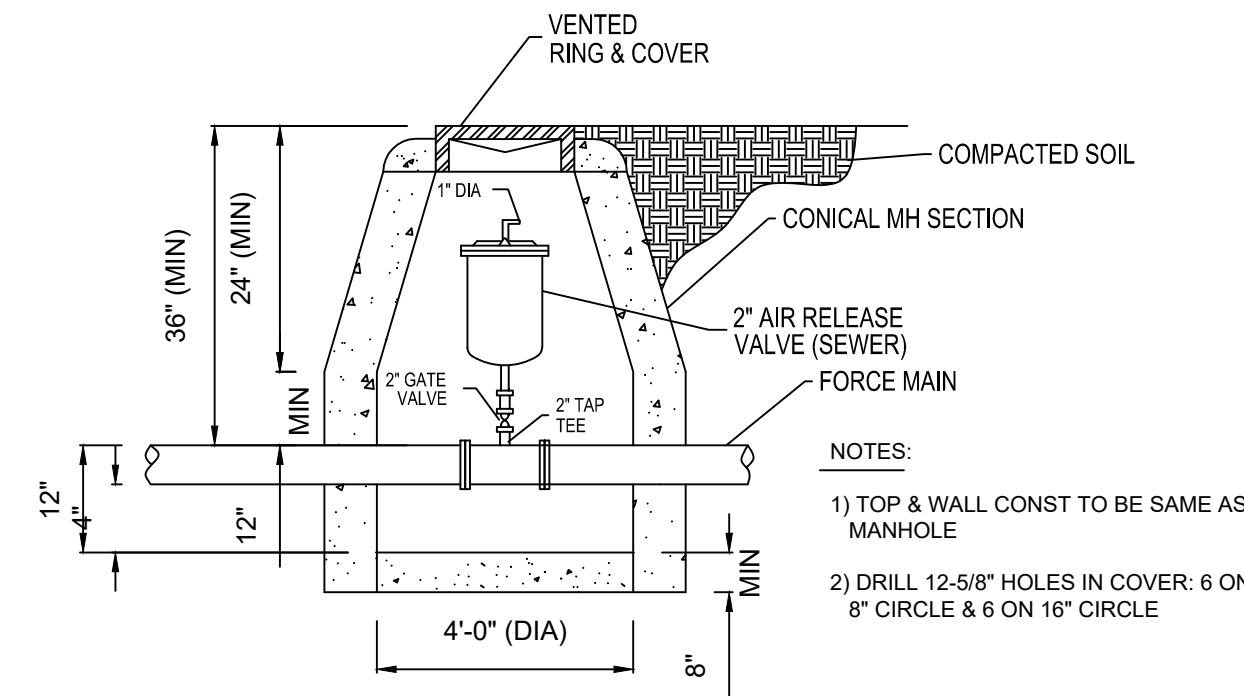
- MANHOLE BASES TO BE 4000 PSI, 28 DAY STRENGTH, LIMESTONE MIX CONCRETE ON UNDISTURBED SUB-GRADE OR ON COMPACTED SELECT FILL MATERIAL AS AUTHORIZED.
- MANHOLE SIDEWALL MATERIAL TO BE CONCRETE IN ACCORDANCE WITH PROPOSAL FORM REQUIREMENTS.
 - 4" I.D. FOR SEWER SIZES 6" THRU 24"
 - 5" I.D. FOR SEWER SIZES 24" THRU 30"
 - 6" I.D. FOR SEWER SIZES 36" THRU 42"
- SET MANHOLE TOPS AS FOLLOWS:
 - IN STREETS, ROADS, HIGHWAYS, AND OTHER PAVED AREAS: FLUSH WITH FINISHED PAVING GRADE.
 - UNDEVELOPED AREAS, SUCH AS FIELDS, WOODS, ETC...: 12" ABOVE GROUND.
 - OTHER AREAS: 1" ABOVE GROUND.
- MANHOLE FRAMES SHALL HAVE MIN. OPENING OF 22" DIA.
- ALL DOGHOUSE MANHOLES TO BE INSTALLED WITH A-LOK WEDGE STYLE WATER STOP KITS.

STANDARD MANHOLE



MANHOLE DETAILS

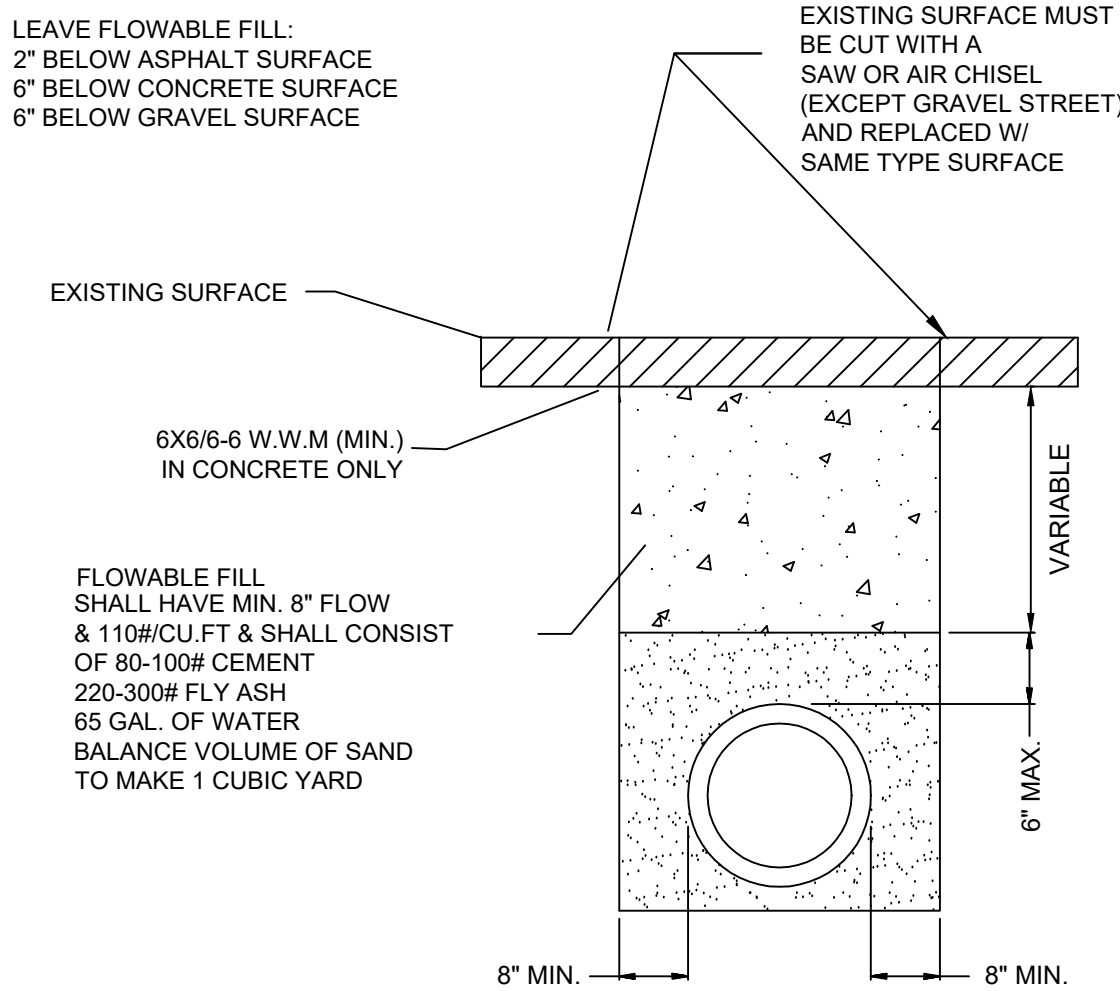
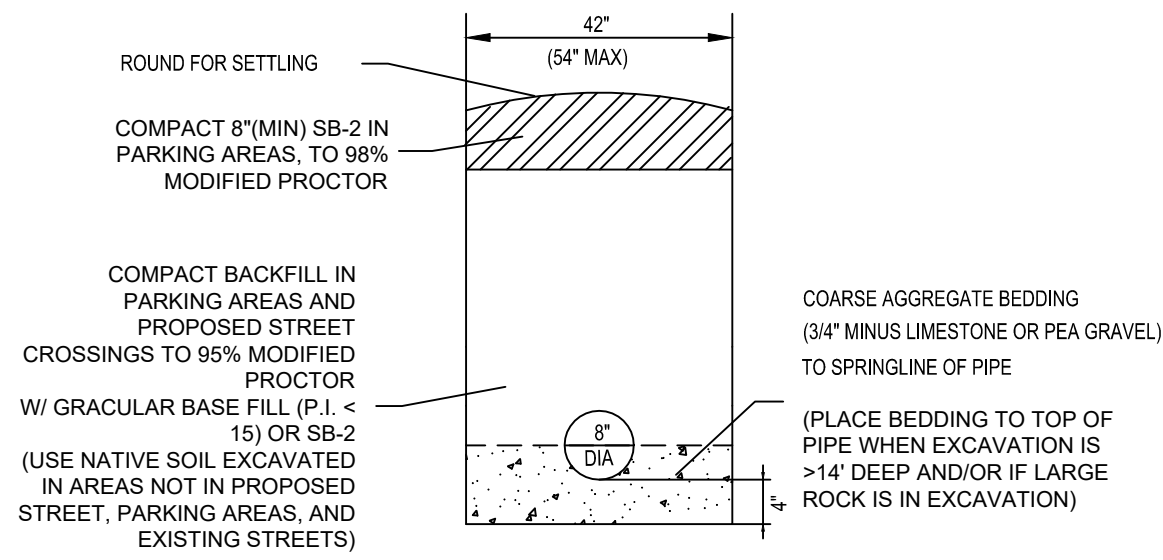
AIR/VACUUM RELEASE VALVE DETAIL



NON-EXISTING STREET LOCATIONS
SDR-26 PVC TRENCH DETAIL

NOTES:

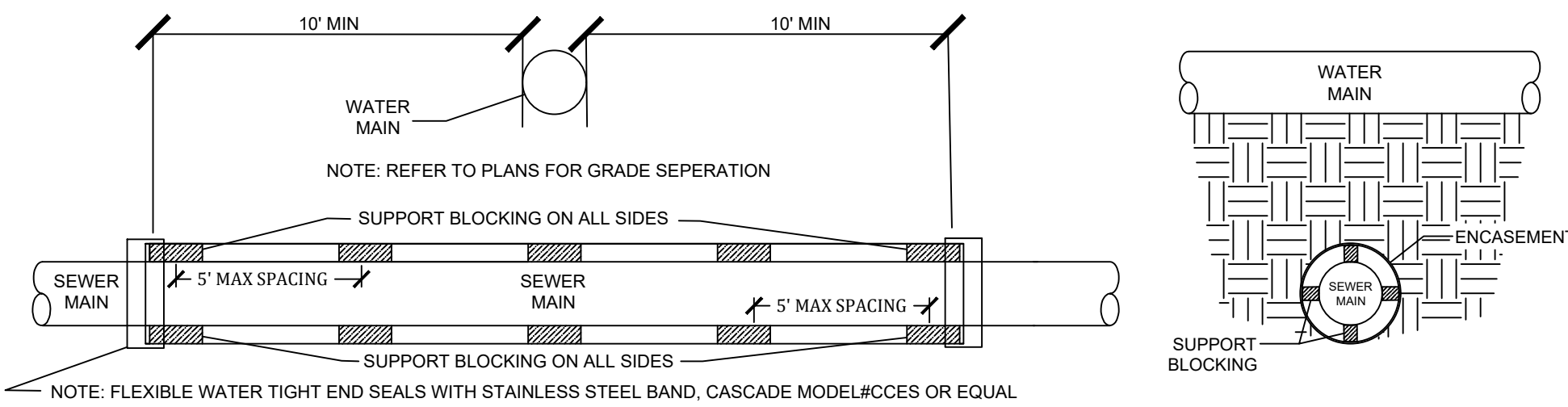
- COARSE AGGREGATE SHALL BE MECHANICALLY TAMPED WHEN USED.
- PIPE IN TRENCH SHALL BE PLACED ON NO LESS THAN 4" OF 3/4" MINUS LIMESTONE. ALL OVER EXCAVATION SHALL BE COMPACTED BACK TO GRADE W/ BEDDING MATERIAL.
- PVC PIPE SHALL BE SDR-26 AND INSTALLED IN ACCORDANCE WITH UNI-BELL PVC PIPE ASSOCIATION'S RECOMMENDATIONS FOR CONSTRUCTION.



EXISTING STREET LOCATIONS

PVC TRENCH DETAIL

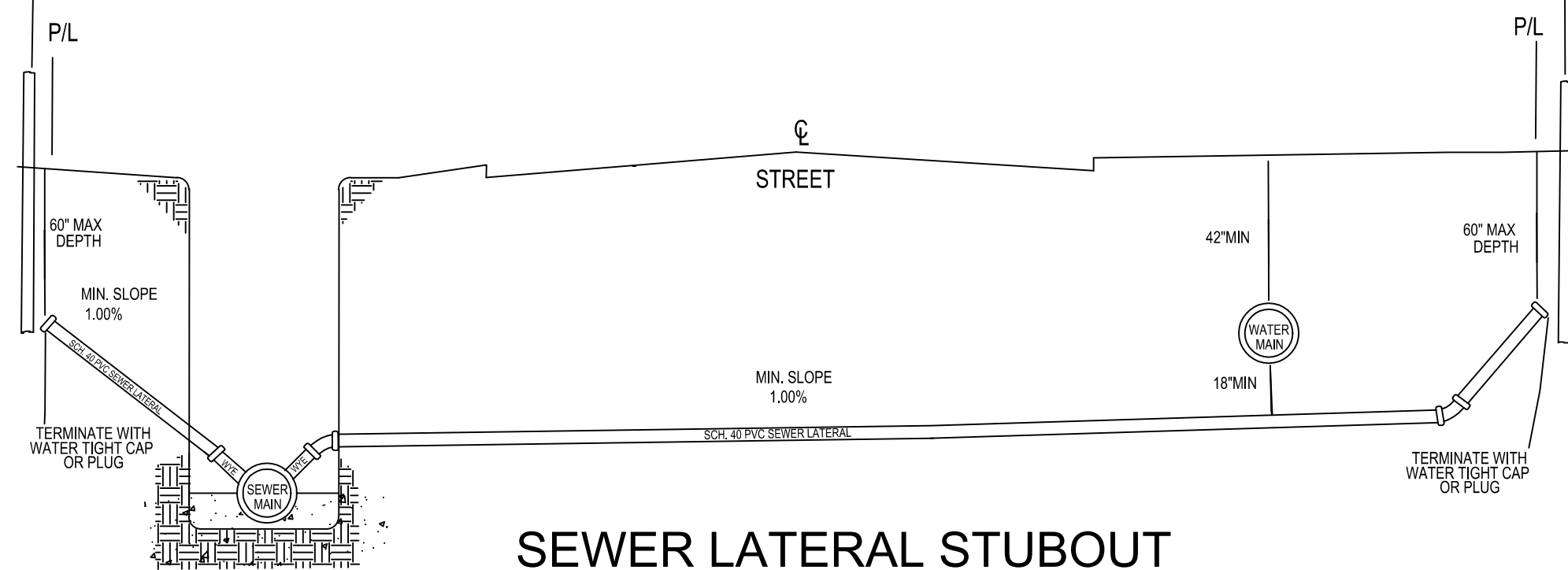
NOTE: 0.25 THICKNESS STEEL OR SCH 40\"/>



ENCASEMENT FOR SEWER MAINS AT WATER CROSSINGS

NOTE: WHEN 18\"/>

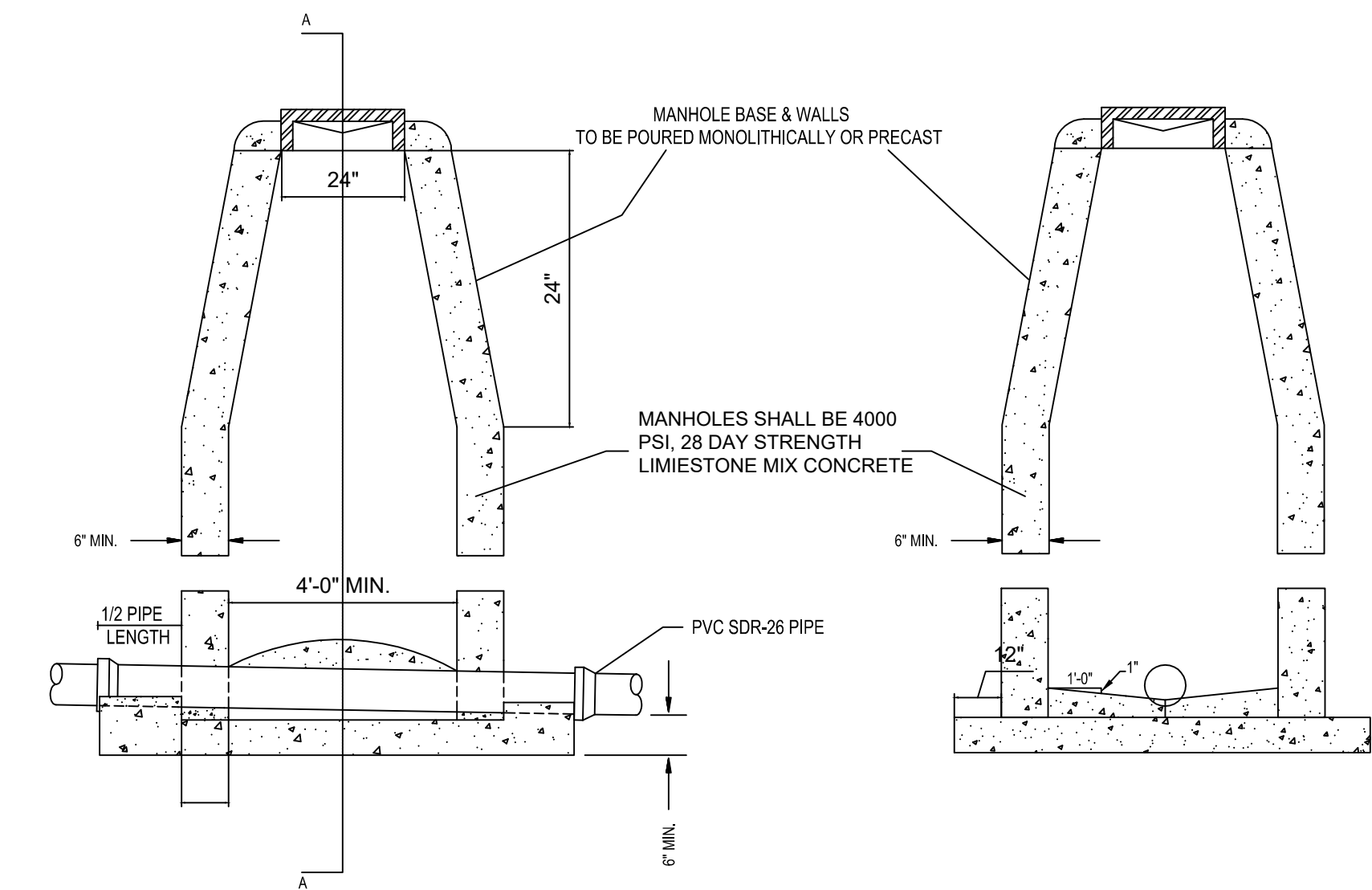
USE 4\"/>



SEWER LATERAL STUBOUT
PERMITS REQUIRED BEFORE INSTALLATION

USE SAME CONFIGURATION FOR MANHOLE STUBOUTS

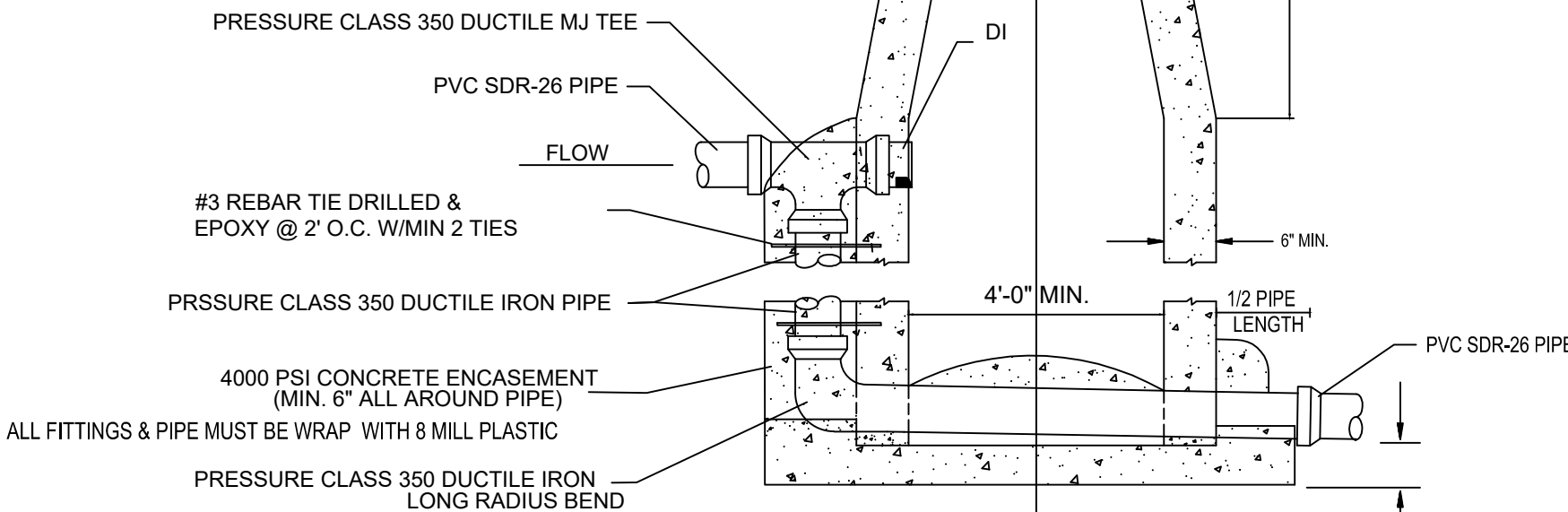
MANHOLE
CONSTRUCTION DETAIL



SIDE ELEVATION

SECTION A-A

STANDARD MANHOLE



SIDE ELEVATION

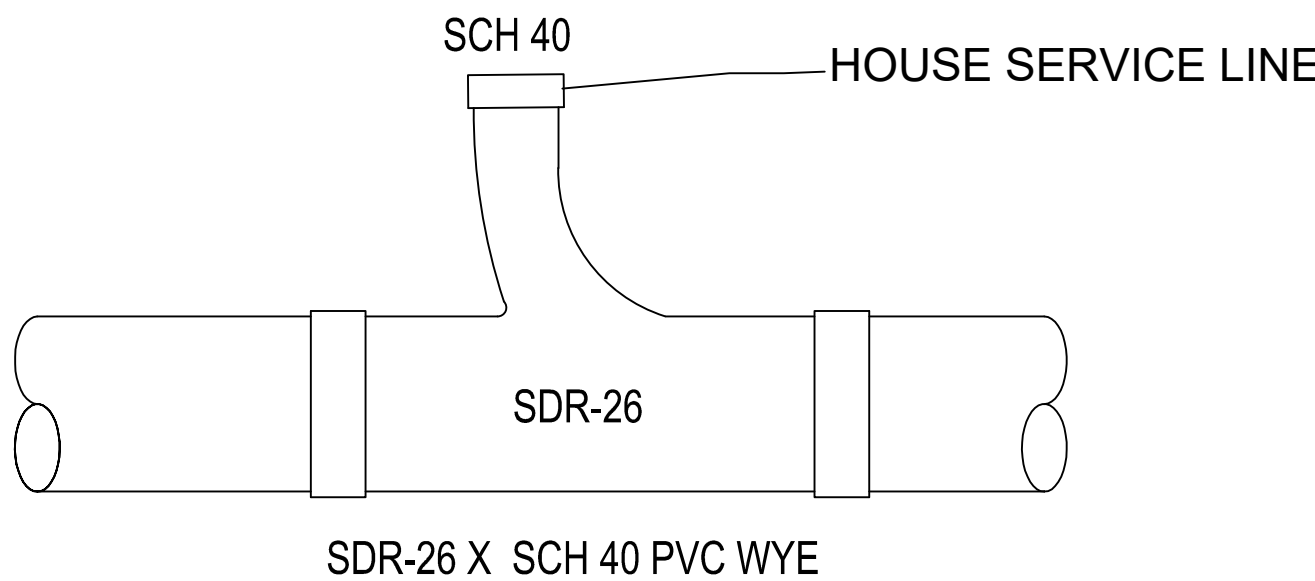
SECTION A-A

DROP MANHOLE

SINGLE WYE

ALL SERVICE LINES UNDER PAVEMENT SHALL BE PVC SCH 40 PIPE W/ PVC SCH 40 COUPLINGS

TEE WYE ONLY



CONCRETE ENCASEMENT
FOR
DITCH CROSSINGS

NOTE: ENCASEMENT PIPE MUST PRESSURE CLASS 350 DUCTILE IRON AND WRAP DUCTILE IRON PIPE WITH 8 MILL PLASTIC

PACIFIC GROVE - PHASE 2

SEWER DETAILS



REVISIONS

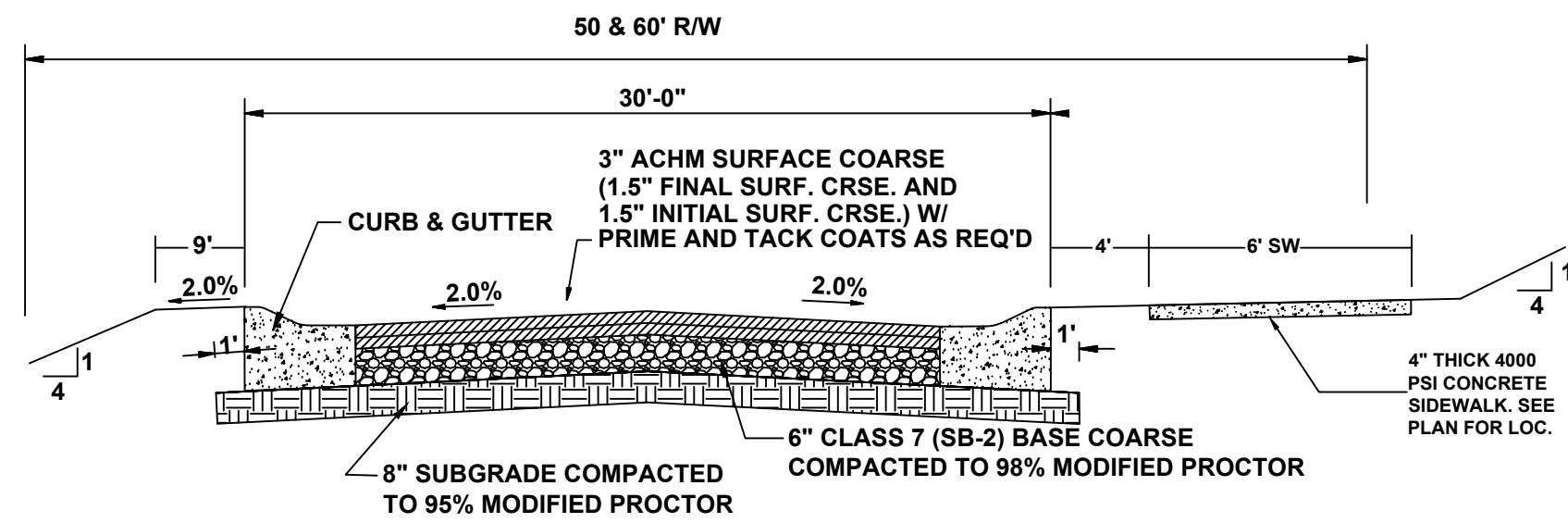
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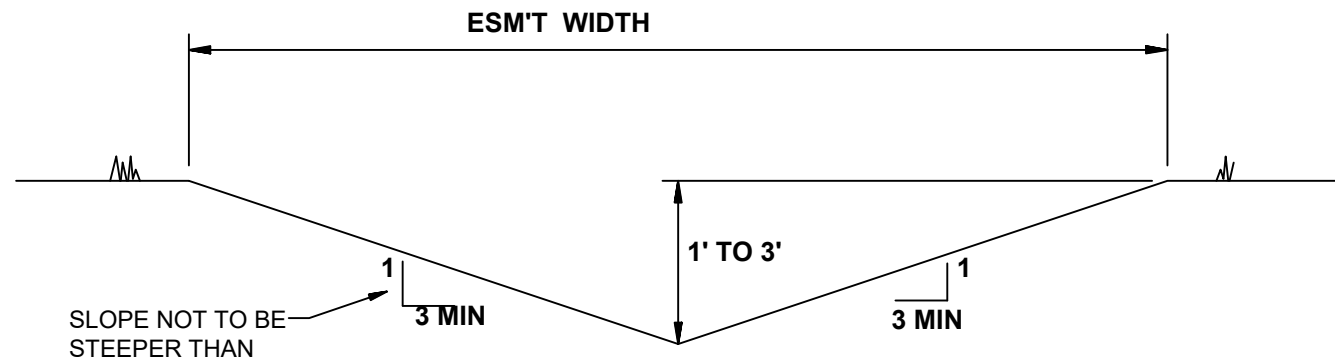
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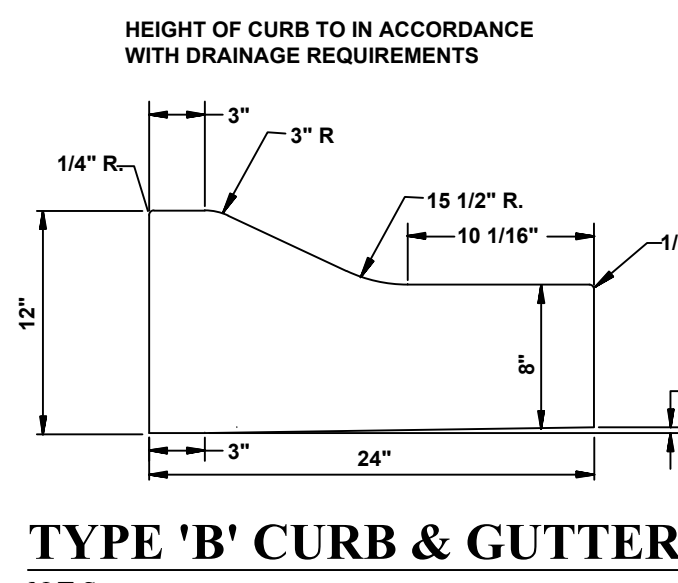
DT-3



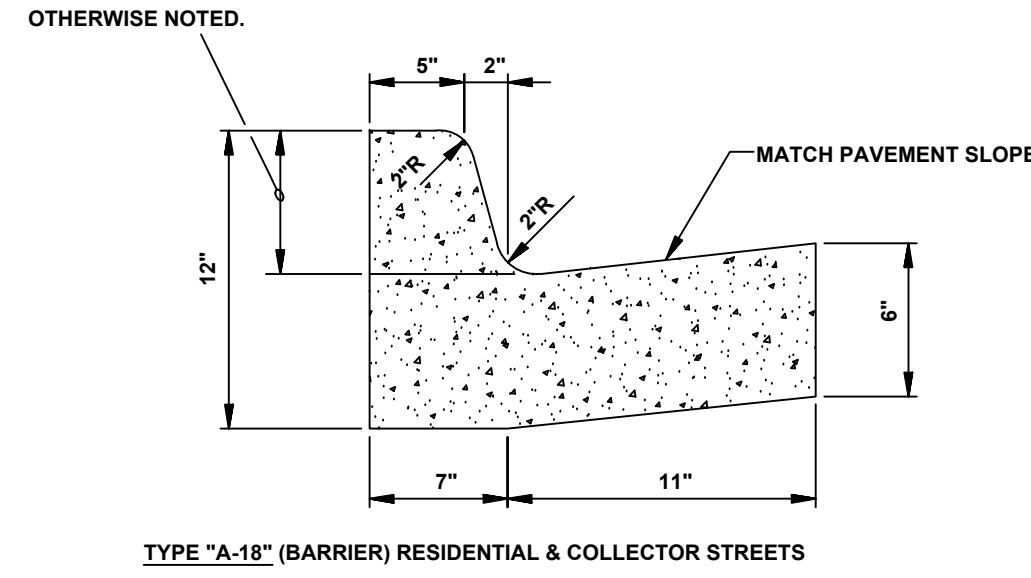
TYPICAL SECTION - INTERIOR STREETS
N.T.S.



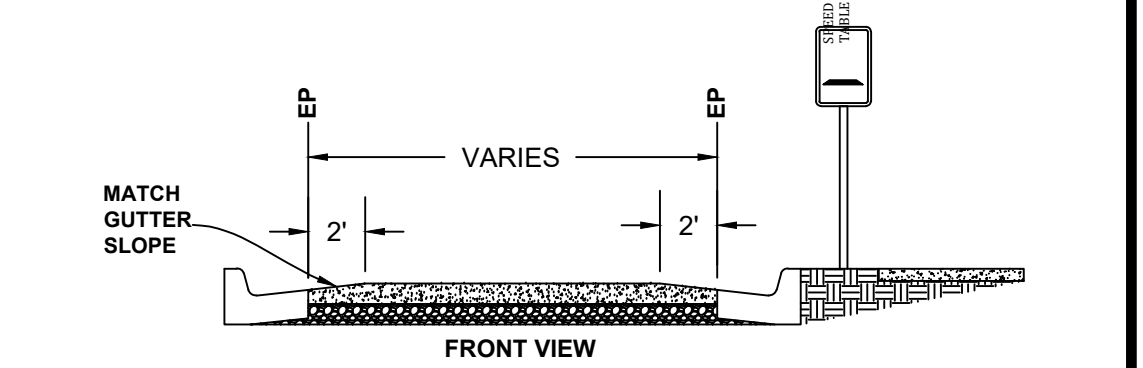
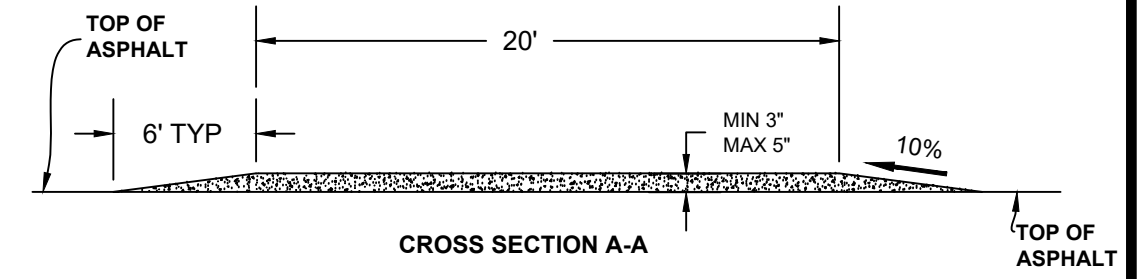
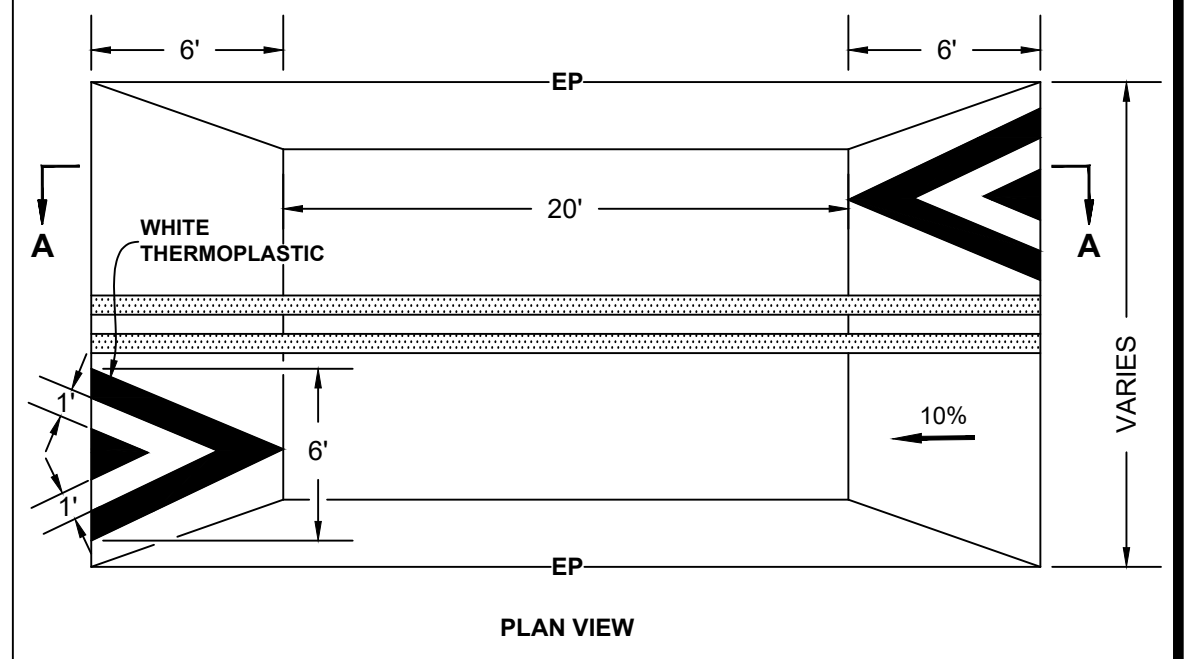
'A' TYPICAL DITCH DETAIL
N.T.S.



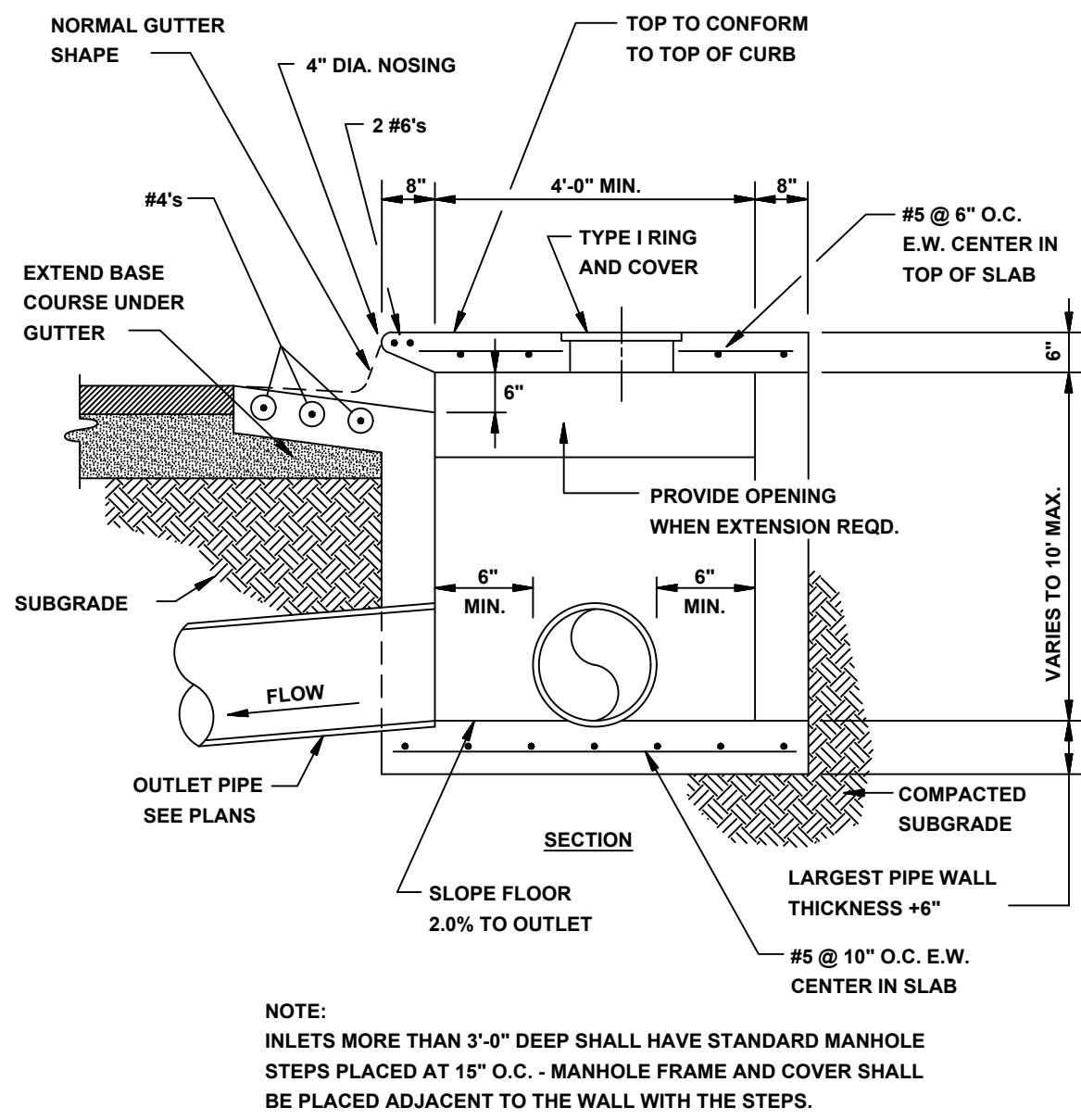
TYPE 'B' CURB & GUTTER
N.T.S.



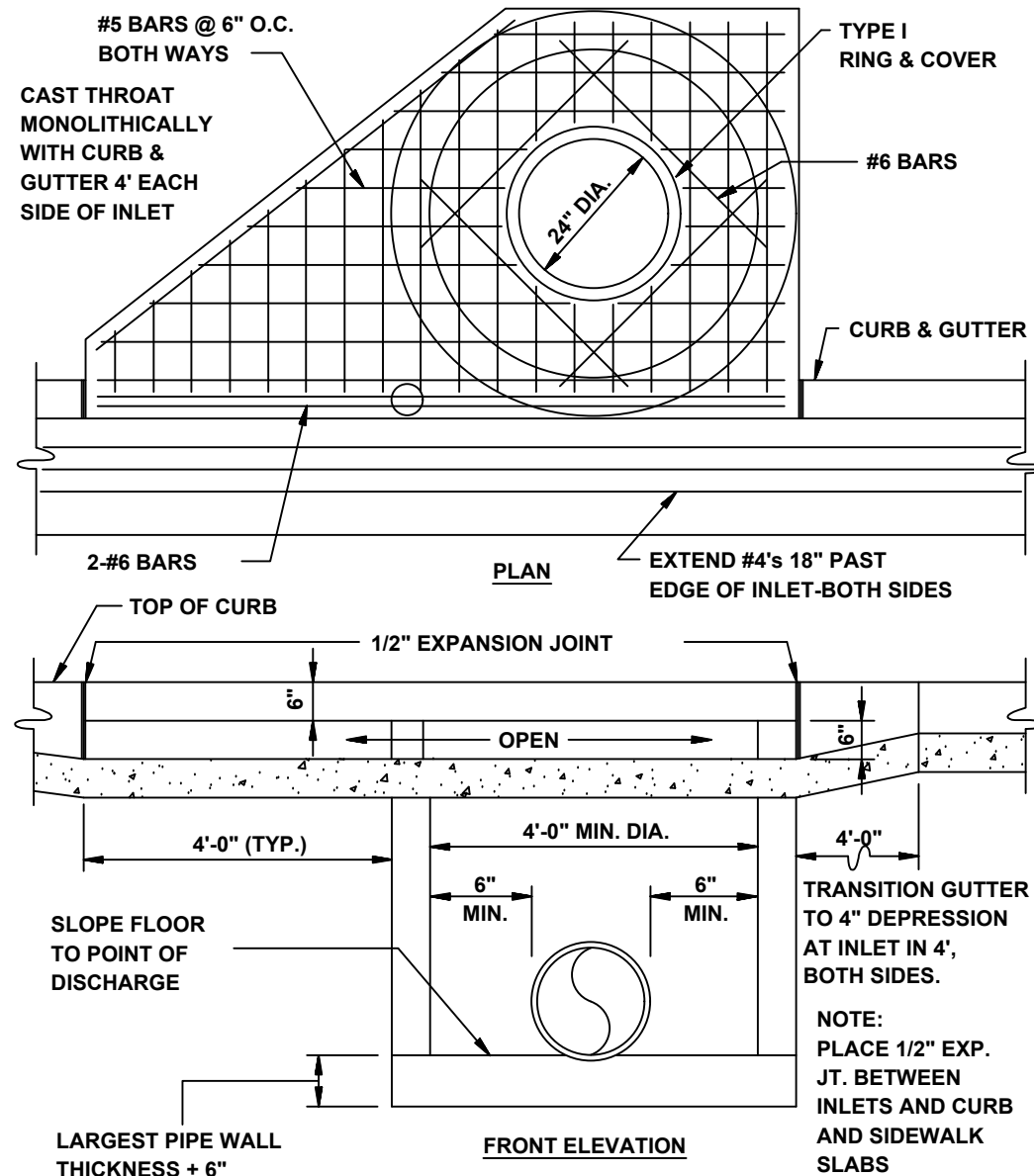
COMBINATION CURB & GUTTER
N.T.S.



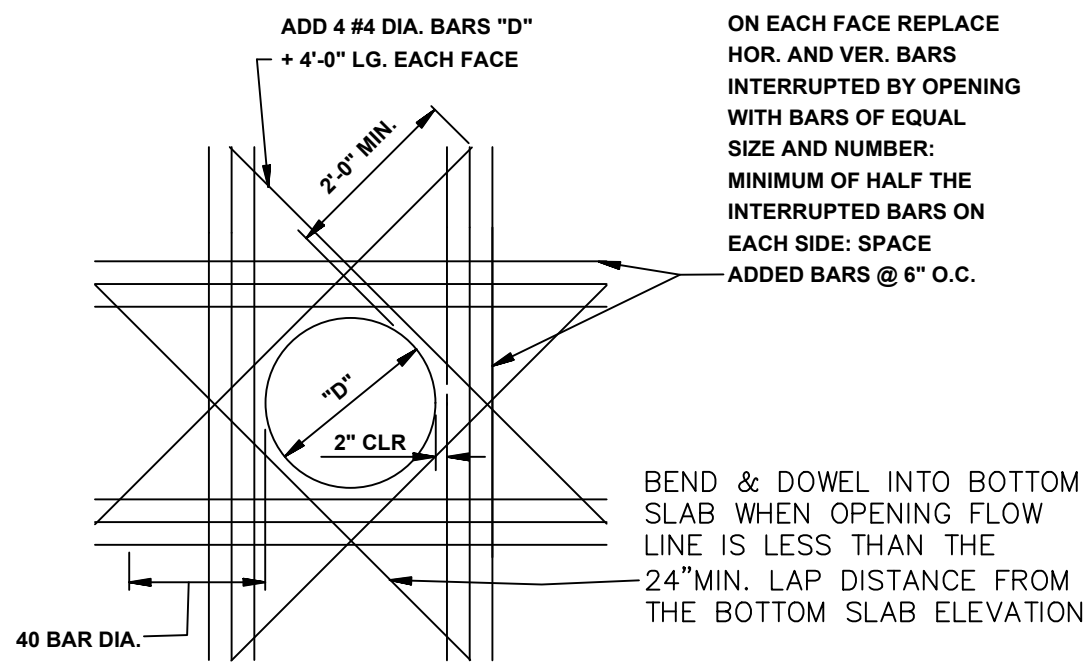
SPEED TABLE
N.T.S.



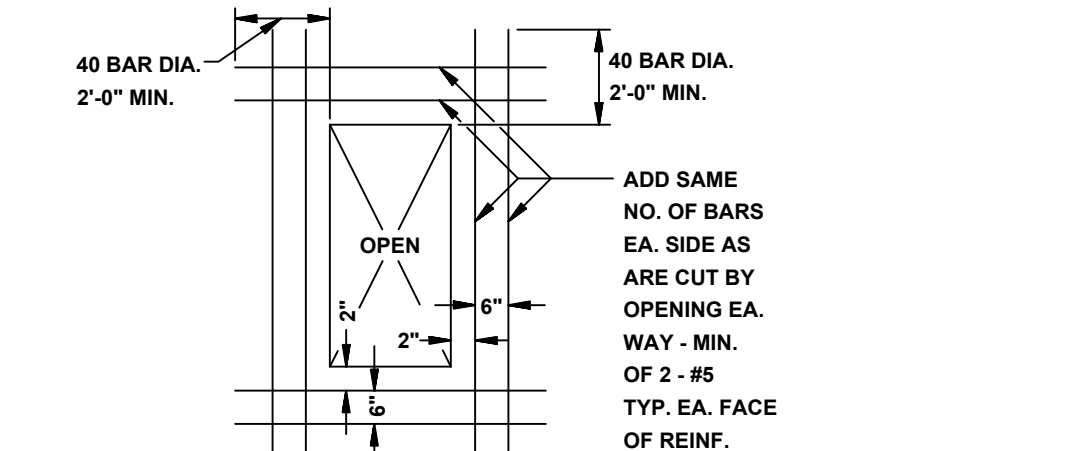
SECTION - CIRCULAR CURB INLET
N.T.S.



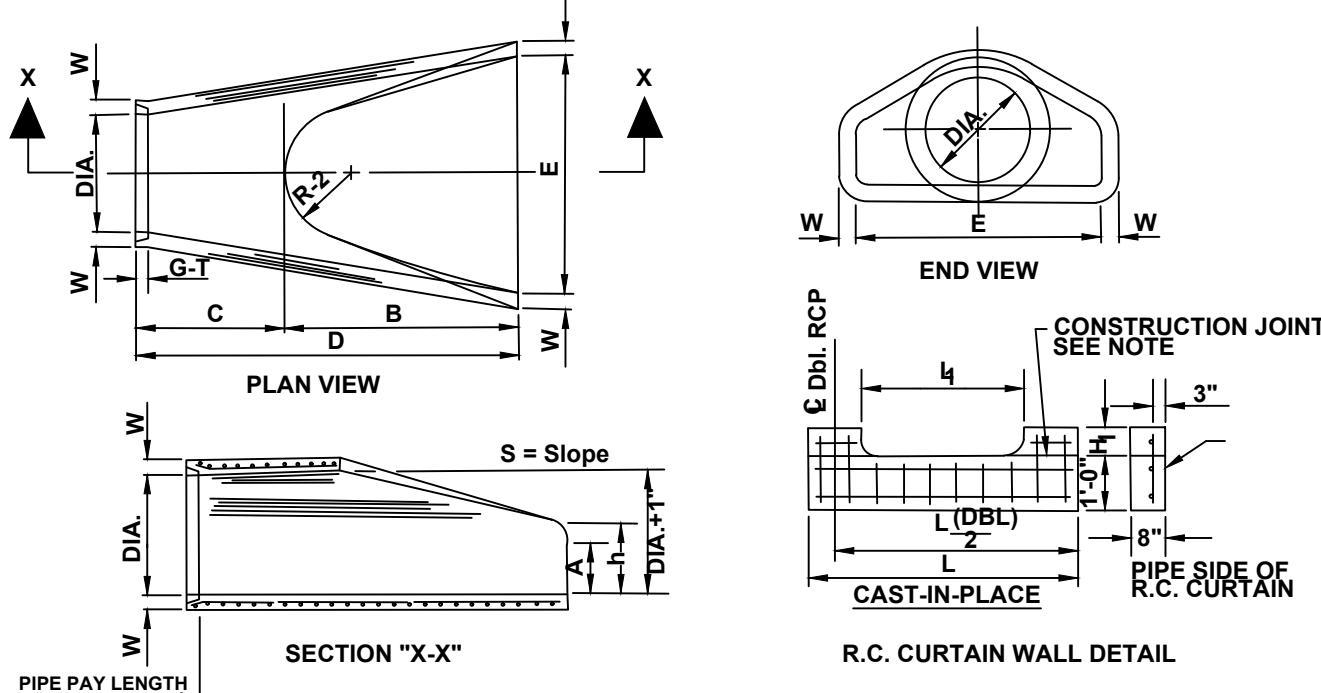
CIRCULAR CURB INLET W/ INLET EXTENSION
N.T.S.



ADDED REINFORCEMENT AT ROUND OPENING IN WALL OR SLAB
N.T.S.

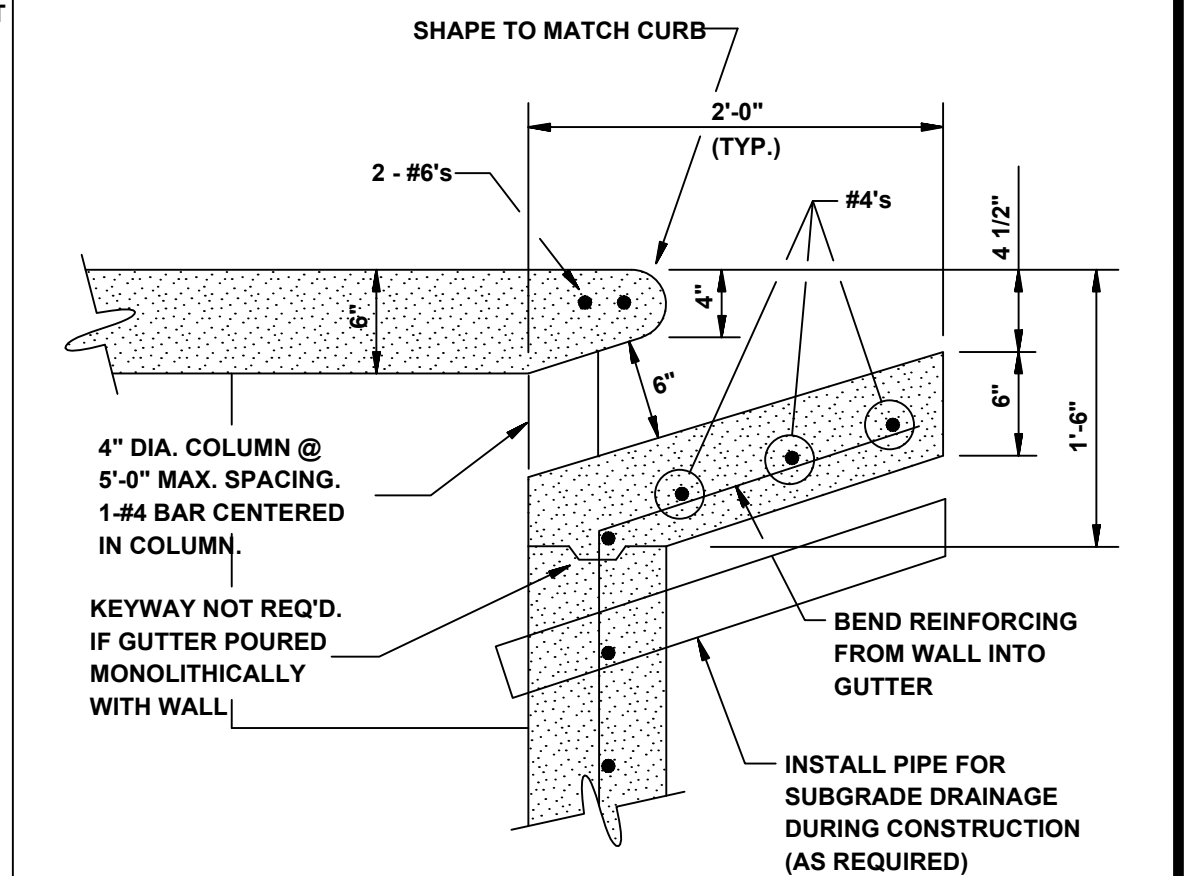


ADDED REINFORCEMENT AT RECTANGULAR OPENING IN WALL OR SLAB
N.T.S.

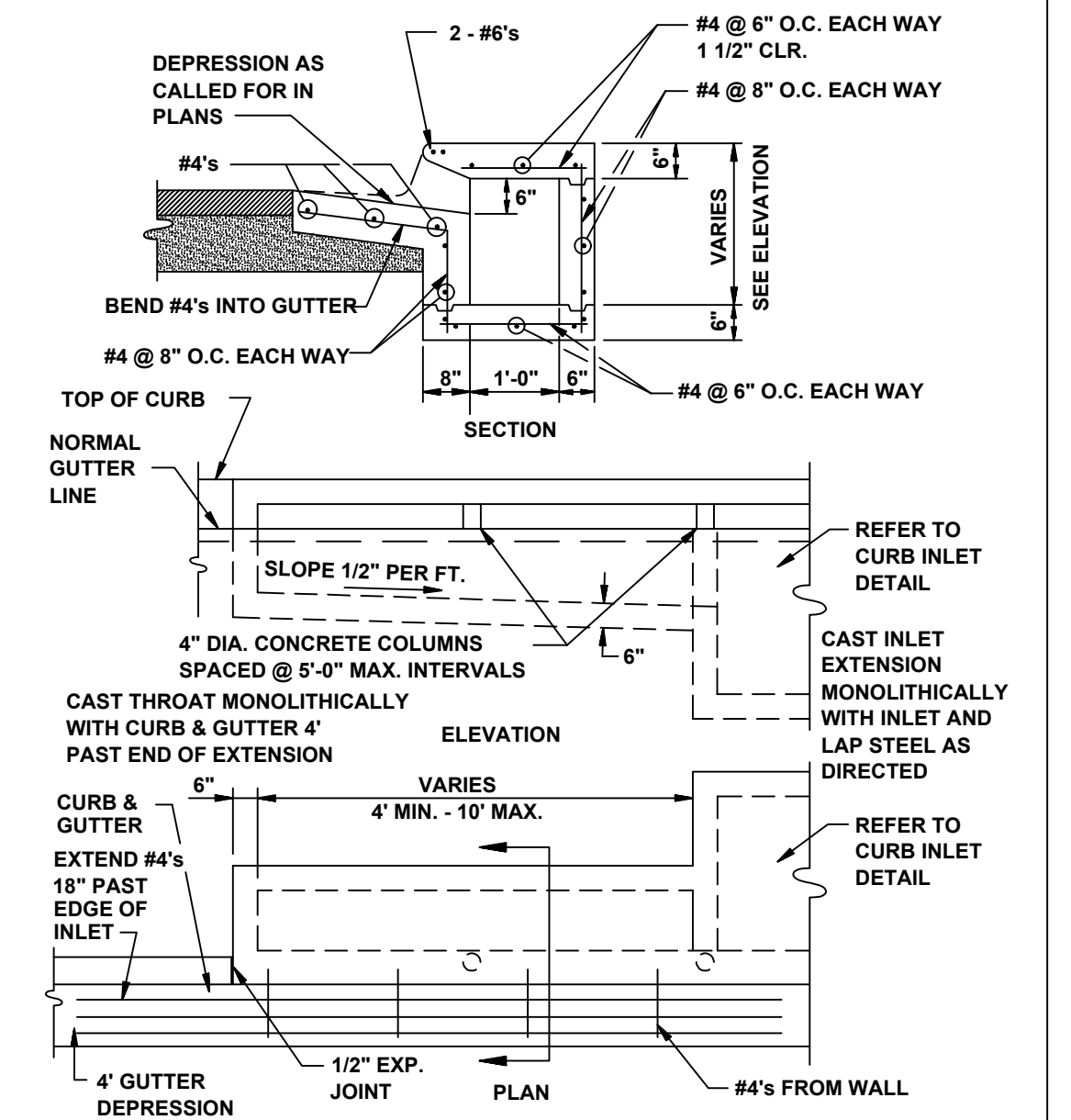


- NOTES:
- The portion of the R.C. Curtain Wall beneath the Flared End Section (Lower 1'-0") shall be placed monolithically. The Flared End Section shall then be set in place and the remaining portions of the R.C. Curtain Wall placed.
 - All reinforcing steel are #4 Bars at 6" O.C.
 - No separate payment will be made for the Curtain Walls. They shall be considered subsidiary to the Flared End Sections.
 - Tongue End On Upstream Section. Groove End On Downstream Section.

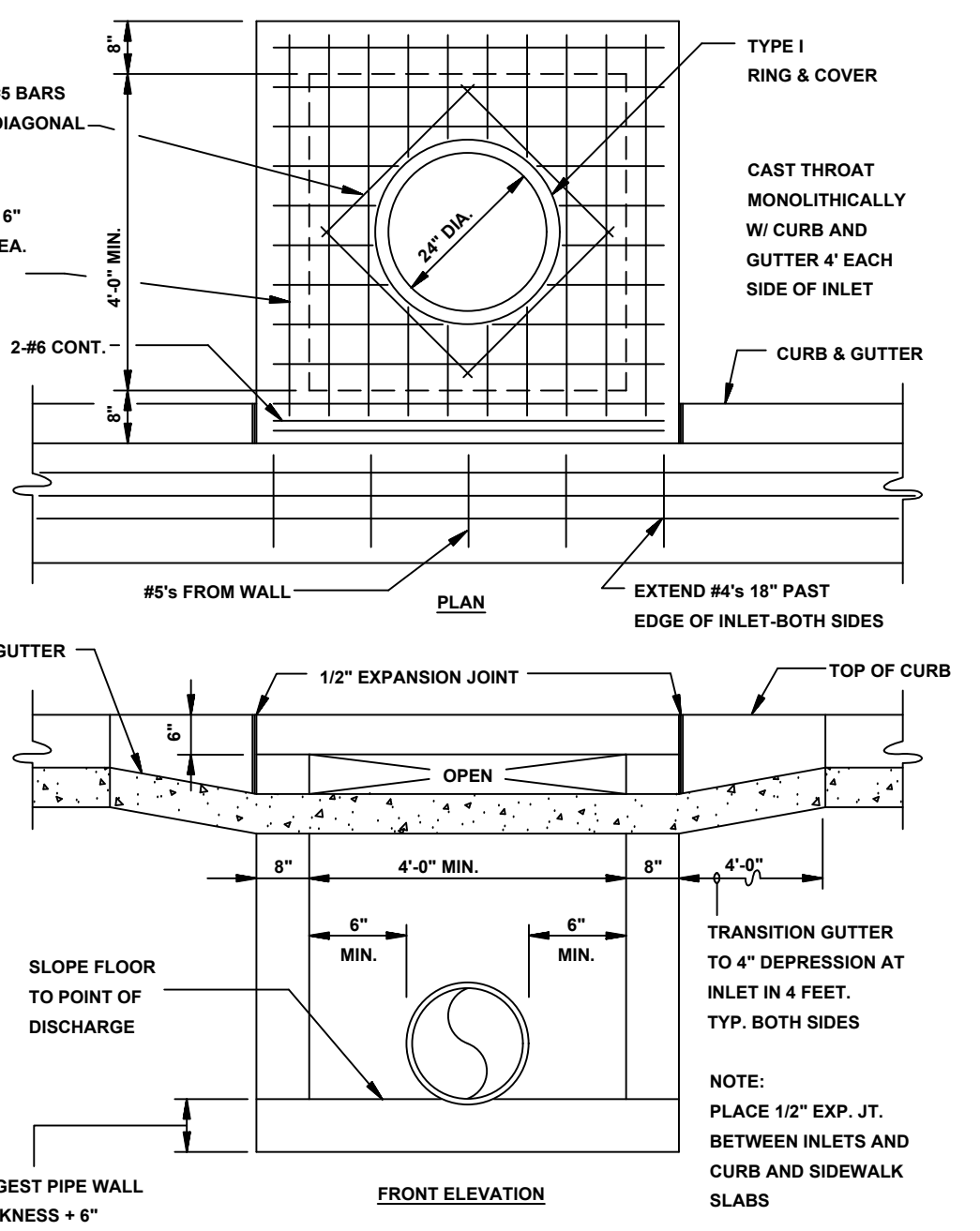
FLARED END SECTION DETAIL FOR REINFORCED CONCRETE PIPE CULVERT
N.T.S.



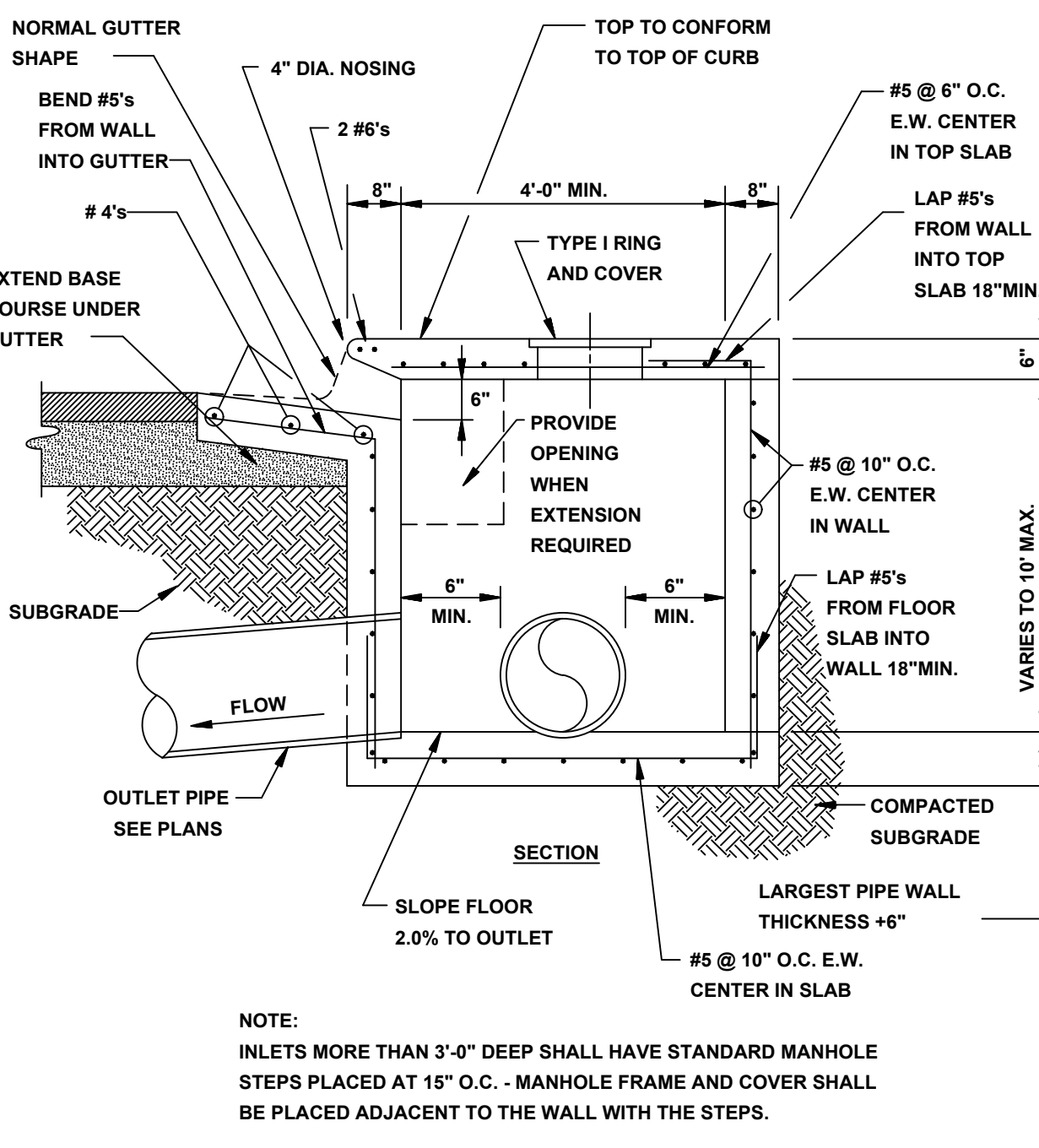
CURB OPENING
N.T.S.



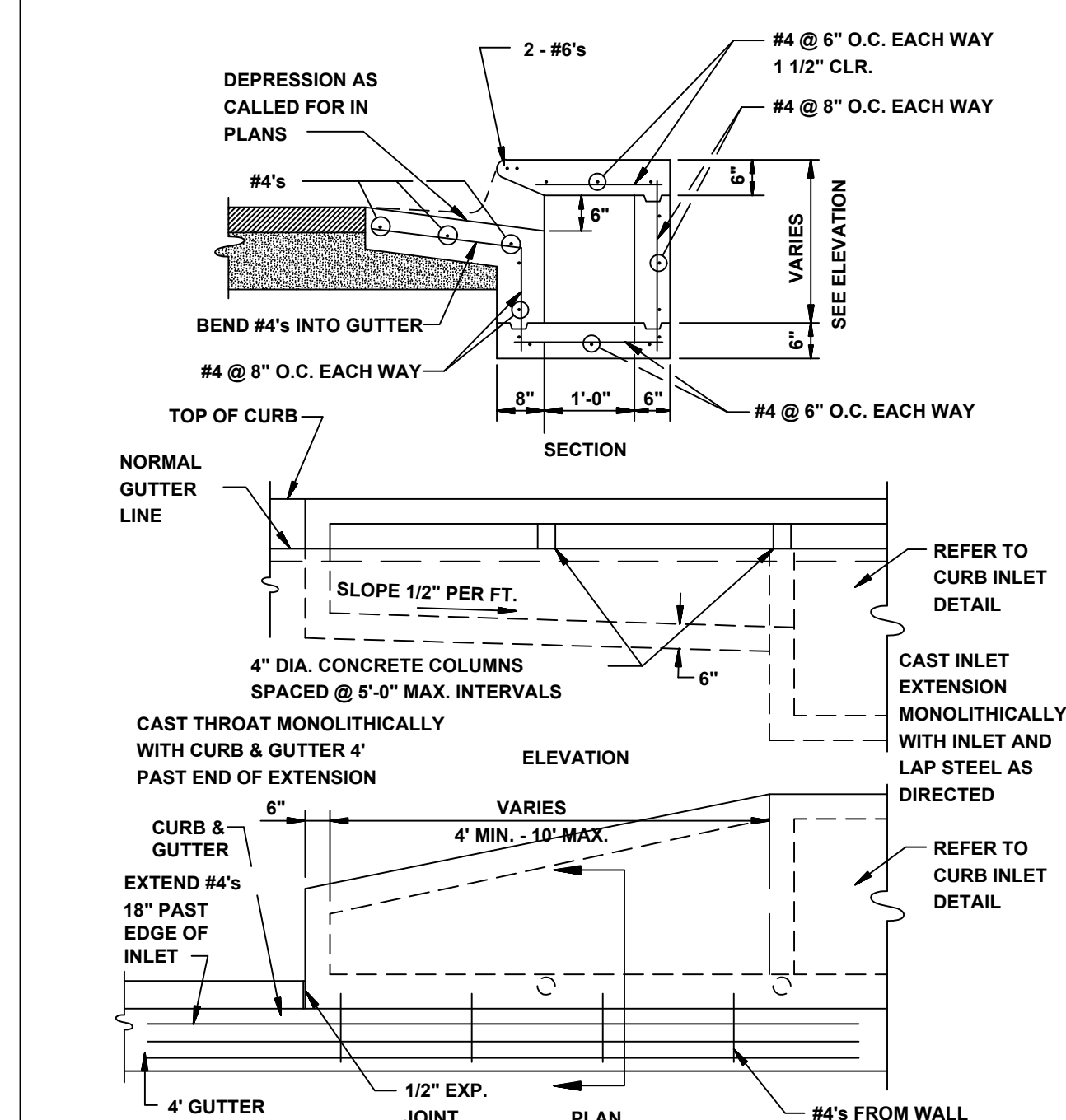
RECTANGULAR CURB INLET EXTENSION
N.T.S.



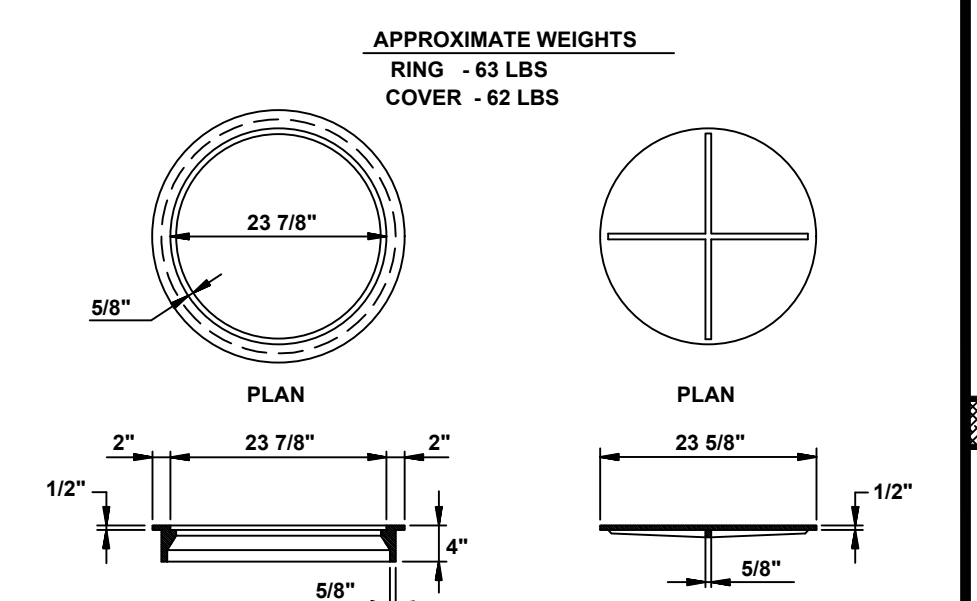
RECTANGULAR CURB INLET
N.T.S.



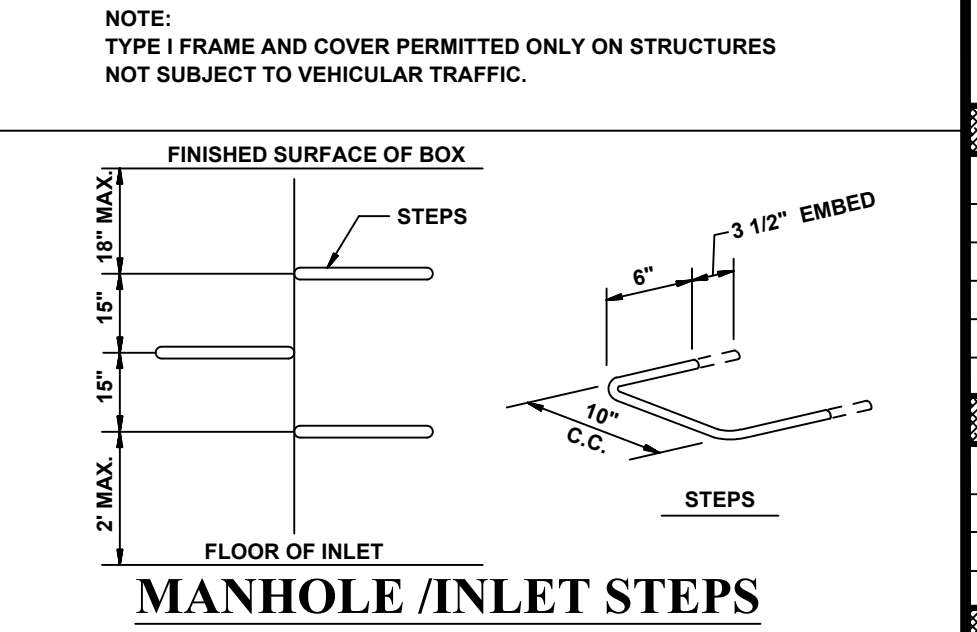
SECTION - TYPICAL CURB INLET - TYPE 'A'
N.T.S.



ALTERNATE CURB INLET EXTENSION
N.T.S.



TYPE I RING & COVER
N.T.S.



- STEPS SPECIFICATIONS:
- MANHOLE STEPS: CORROSION RESISTANT, COATED AND REINFORCED WITH STEEL PER ASTM C-478. STEEL REINFORCING MINIMUM 1/2" DIAMETER.
 - CAPABLE OF SUPPORTING MINIMUM 300 LB. LOAD.
 - NON-SLIP TEXTURED TREADS
 - REQUIRED IN ALL STRUCTURES 3'-0" DEEP OR DEEPER, UNLESS SPECIFIED OTHERWISE