

# CITY OF SPARKS

## BERGIN WAY STORM DRAIN

### CITY OF SPARKS, WASHOE COUNTY, NEVADA



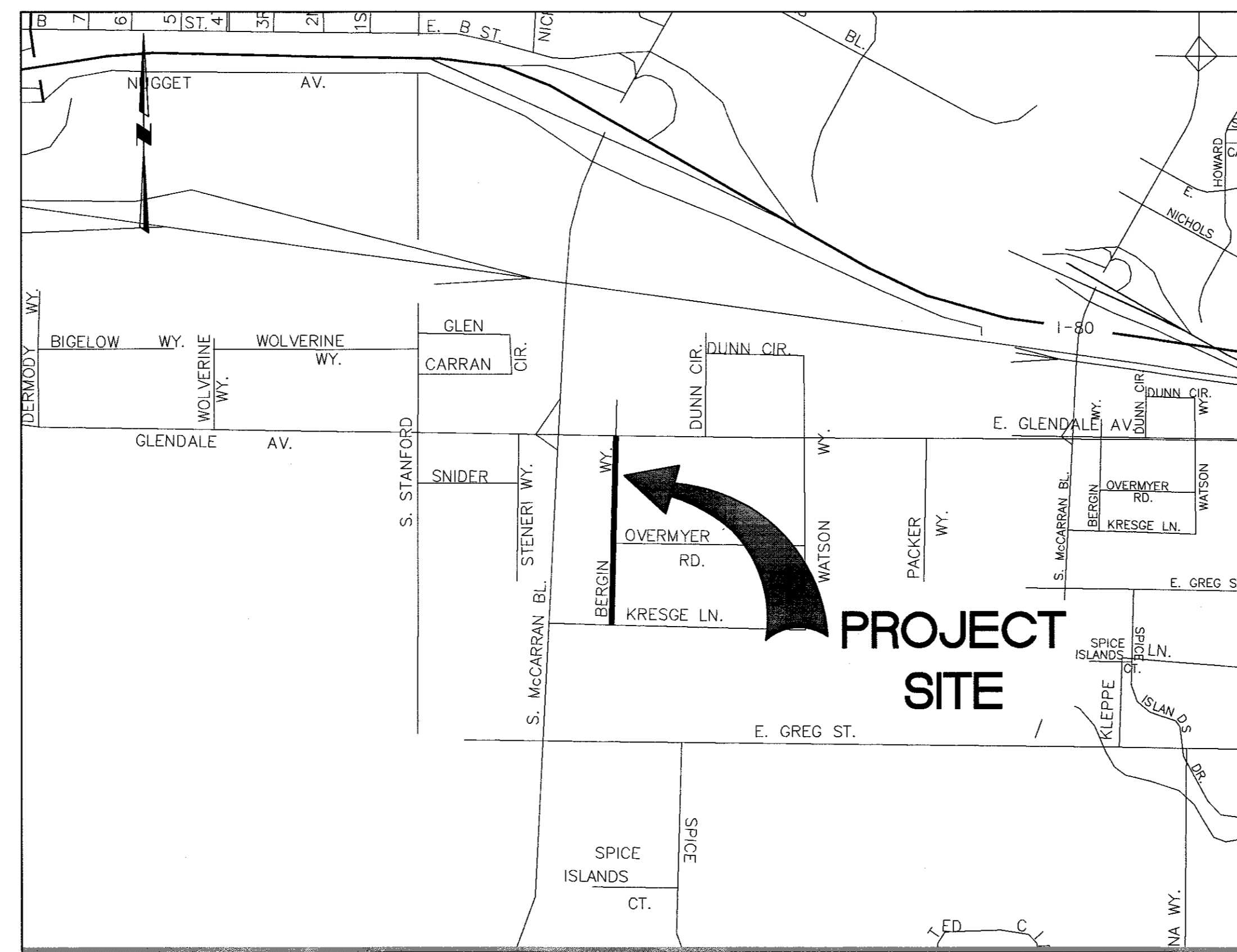
COS BID NUMBER: 17/418-007  
PWP NO: WA-2017-247

#### SPARKS CITY COUNCIL

MAYOR ..... GENO MARTINI  
WARD ONE ..... DONALD ABBOTT  
WARD TWO ..... ED LAWSON  
WARD THREE ..... RON SMITH  
WARD FOUR ..... CHARLENE BYBEE  
WARD FIVE ..... KRISTOPHER DAHIR  
CITY MANAGER ..... STEPHEN DRISCOLL

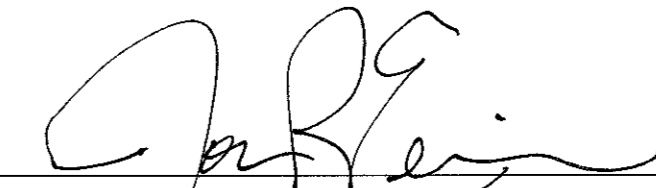
#### CIVIL:

CFA, INC.  
1150 CORPORATE BOULEVARD  
RENO, NEVADA 89502  
(775) 856-1150 VOICE  
(775) 856-1160 FAX  
CONTACT: CATIE HARRISON, P.E.



VICINITY MAP  
SCALE: NTS

#### APPROVALS

  
 JON R. ERICSON, P.E., P.T.O.E.  
 CITY ENGINEER

8/8/17  
DATE

#### BASIS OF BEARINGS AND COORDINATES:

THE BASIS OF BEARINGS FOR THIS SURVEY IS NEVADA STATE PLANE, WEST ZONE NAD83(94) BASED ON REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS UTILIZING CORRECTIONS FROM THE NORTHERN NEVADA COOPERATIVE REAL TIME NETWORK. COORDINATES AND DISTANCES HEREON ARE AT GROUND LEVEL BASED ON A COMBINED GRID TO GROUND FACTOR OF 1.000197939.

#### BASIS OF ELEVATIONS:

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED UPON GPS OBSERVATIONS UTILIZING GEOID99. SITE BENCHMARK #98 WAS USED IN THIS SURVEY WITH AN ELEVATION OF 4449.95.

#### PREPARED AND SUBMITTED BY:

CATIE HARRISON, P.E. \_\_\_\_\_ DATE \_\_\_\_\_  
PROJECT MANAGER



## GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CITY OF SPARKS STANDARDS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) AND THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION (SDPWC), LATEST EDITION, AS ADOPTED BY CITY OF SPARKS, AND SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. ALL SPECIFICATIONS REFERENCED HEREIN REFER TO THE SSPWC UNLESS INDICATED OTHERWISE.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL THROUGHOUT CONSTRUCTION, IN ACCORDANCE WITH APPLICABLE PARTS OF SPECIFICATION SECTION 336, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD, LATEST EDITION).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SAFETY DURING CONSTRUCTION, AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL FENCE AND OR BARRICADE THE CONSTRUCTION AREA AS REQUIRED TO PROTECT ADJACENT SITES, VEHICULAR TRAFFIC, AND PEDESTRIAN TRAFFIC. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES ADJACENT TO STREETS, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE OWNER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL.
- THE CONTRACTOR SHALL INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND/OR EROSION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED CONSTRUCTION AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS DUST CONTROL THROUGHOUT THE CONSTRUCTION OF ALL ITEMS SHOWN ON THESE DRAWINGS IN CONFORMITY WITH SECTION 40.030 OF WASHOE COUNTY AIR POLLUTION REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REGULAR CLEANING OF ALL MUD, DIRT, DEBRIS, ETC., FROM ANY AND ALL ADJACENT STREETS AND SIDEWALKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AS REQUIRED BY CITY OF SPARKS. THE DUST CONTROL PERMIT SHALL BE AT THE CONTRACTOR'S EXPENSE. THE ENCROACHMENT, EXCAVATION, AND LANE CLOSURE PERMITS ARE "NO FEE" PERMITS FOR CITY PROJECTS.
- ALL DIMENSIONS ARE TO FRONT FACE OF CURB UNLESS NOTED OTHERWISE.
- SHOULD ANY PREHISTORIC OR HISTORIC REMAINS OR ARTIFACTS BE DISCOVERED DURING SITE DEVELOPMENT, WORK SHALL BE TEMPORARILY HALTED AT THE SPECIFIC SITE AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DEPARTMENT OF MUSEUMS, LIBRARY AND ARTS, SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.
- A PRECONSTRUCTION CONFERENCE WILL BE HELD WITH CITY OF SPARKS PRIOR TO ANY CONSTRUCTION.
- NO MATERIALS OF ANY KIND SHALL BE STOCKPILED OR CONSTRUCTION EQUIPMENT PARKED ON CONCRETE OR ASPHALT SURFACES.
- CONSTRUCTION OF STREET IMPROVEMENTS MUST ALLOW FOR THE PERPETUATION OF ALL EXISTING LEGAL ACCESSES AND EXISTING DRIVEWAYS.
- THE CONTRACTOR SHALL FURNISH PRODUCT SUBMITTALS FOR PUBLIC IMPROVEMENTS INCLUDING MANUFACTURER'S SPECIFICATIONS, SHOP DRAWINGS, CONCRETE MIX DESIGNS, ASPHALT MIX DESIGNS, GRADATION CERTIFICATIONS, ETC. FOR REVIEW BY THE ENGINEER OF RECORD. SUBMITTALS SHALL BE FURNISHED PROMPTLY AFTER EXECUTION OF THE CONTRACT, BUT IN ALL CASES PRIOR TO DELIVERY OF SUCH MATERIALS.
- THE CONTRACTOR UPON COMPLETION OF THE PROJECT, SHALL PREPARE AND SUBMIT AS-BUILT DRAWINGS TO THE OWNER. SUBMITTAL SHALL BE IN THE FORM OF A CD IN 300 DPI, MULTIPAGE PDF FORMAT.
- THE CONTRACTOR IS REQUIRED TO FILE A NOTICE OF INTENT (NOI) WITH THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION. THE CONTRACTOR IS REQUIRED TO SUBMIT THE NOI, PAY THE ASSOCIATED FEES, AND PROVIDE A COPY OF THE NOI RECEIPT WITH THE EE PERMIT APPLICATION. BEST MANAGEMENT PRACTICES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL COMPLY AND MAINTAIN THE CONSTRUCTION SITE INSPECTION CHECKLIST, LOCATED IN APPENDIX D OF THE TRUCKEE MEADOWS BMP HANDBOOK. THE CHECKLIST SHALL BE ONSITE FOR REVIEW BY STATE AND LOCAL GOVERNMENT INSPECTORS. CONTRACTOR SHALL INSPECT THE SITE DAILY; PRIOR TO FORECASTED RAIN EVENTS AND WITHIN 24 HOURS OF ANY RAIN EVENT. IF AN INSPECTOR DETERMINES THAT INSTALLED STORM WATER CONTROLS PLACE THE CITY AT RISK OF VIOLATING ITS NPDES PERMIT, THE INSPECTOR MAY ORDER A CHANGE TO THE STORM WATER CONTROLS. IF THE CHANGE IS NOT ACCEPTABLE OR IS NOT IMMEDIATELY IMPLEMENTED, A VIOLATION POSSIBLY RESULTING IN A FINE MAY BE ISSUED. THE CONTRACTOR SHALL NOT DISPOSE OR PLACE DEBRIS IN ANY CITY OF SPARKS MANHOLE, CATCH BASIN OR FACILITY.

## DEMOLITION NOTES

- THE REMOVAL OF EXISTING IMPROVEMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC, LATEST EDITION), SECTION 301.00.
- EXISTING IMPROVEMENTS, ADJACENT PROPERTY, FENCING, WALLS, UTILITIES AND OTHER FACILITIES, TREES AND PLANTS THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED FROM INJURY OR DAMAGE RESULTING FROM THE CONTRACTORS OPERATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 301.04 AND 300.04.
- THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, WATER & GAS VALVE COVERS, & UTILITY BOXES AND FRAME AND COVERS, BOTH HORIZONTALLY AND VERTICALLY, AS REQUIRED TO FIT THE NEW WORK. THE CONTRACTOR SHALL REPLACE ANY APPURTENANCE DAMAGED DURING RELOCATION AT THE COST OF THE CONTRACTOR.
- ALL EXISTING FEATURES IN CONFLICT WITH PROPOSED SHALL BE REMOVED, RELOCATED AND/OR REPLACED. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER AND THE GOVERNING AGENCIES PRIOR TO SUCH REMOVAL, RELOCATION AND/OR REPLACEMENT.

## UTILITY NOTES

- UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THE PLANS. HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT, USA, AT (1-800-227-2600) PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE NEW WORK PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY NV ENERGY AT LEAST 48 HOURS PRIOR TO THE START OF UTILITY CONSTRUCTION.
- THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID SHUT OFF OR DISCONNECTION OF ACTIVE UTILITIES. IF SHUT OFFS ARE UNAVOIDABLE, THE CONTRACTOR SHALL COORDINATE THAT SHUT OFF WITH THE AFFECTED CUSTOMERS AND UTILITY COMPANIES AT LEAST 48 HOURS IN ADVANCE OF THE DISRUPTION OF THE SERVICE.
- CONTRACTOR TO PROVIDE ALL MISCELLANEOUS PIPE, FITTINGS AND APPURTENANCES AS REQUIRED TO COMPLETE THE UTILITY WORK AS SHOWN.
- A MANHOLE PROTECTION PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO ANY MANHOLE ADJUSTMENTS. THE PLAN SHALL CLEARLY IDENTIFY HOW THE CONTRACTOR WILL PROTECT FROM ALL DEBRIS ENTERING INTO THE SYSTEM AND A DETAIL OF HOW THE CONTRACTOR IS PREPARED FOR EMERGENCY OVERFLOWS. PRIOR TO PERFORMING ANY ADJUSTMENTS OR GROUTING THE ENGINEER OF RECORD SHALL OBSERVE AND VERIFY THAT THE CONTRACTOR IS IN COMPLIANCE WITH THE "MANHOLE PROTECTION PLAN".
- MANHOLES AND CATCH BASINS SHALL BE PORTLAND CEMENT CONCRETE PER SPECIFICATION SECTION 204.00. MANHOLES AND CATCH BASINS SHALL BE PLACED PER APPLICABLE PARTS OF SPECIFICATION SECTIONS 305.00, 306.00, AND 311.00.
- ALL CATCH BASIN COVERS DESIGNATED TO BE RESET TO GRADE SHALL BE REPLACED WITH A NEW FRAME AND COVER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO VACUUM CLEAN ALL STORM DRAIN & SANITARY SEWER MANHOLES AND CATCH BASINS AFTER REMOVING CONTAINMENT DEVICES UPON COMPLETION OF THE PROJECT.
- ALL B MPS SHALL BE REMOVED FROM CATCH BASINS & MANHOLES PRIOR TO FINAL ACCEPTANCE & RELEASE OF RETENTION.
- THE CONTRACTOR SHALL POTHOLE ALL WATER MAINS AHEAD OF CONSTRUCTION AND VERIFY THAT SUFFICIENT VERTICAL CLEARANCE EXISTS TO PROVIDE SUFFICIENT PROTECTIVE COVER AND TO ACCOMMODATE THE STREET STRUCTURAL SECTION. IF WATER PIPE IS NEAR THE SUBGRADE, THE CONTRACTOR MAY NEED TO PERFORM ADDITIONAL WORK TO SHIELD WATER MAINS FROM DAMAGE. SUCH WORK MAY INCLUDE, BUT NOT BE LIMITED TO, REDUCING EXCAVATION/PULVERIZATION DEPTH OVER THE PIPE ZONE, ADDING BASE OVER THE PIPE TO INCREASE COVER PRIOR TO COMPACTION, OR REDUCING VIBRATORY COMPACTION AND CONSTRUCTION TRAFFIC OVER THE PIPE ZONE. ACTUAL FIELD CONDITIONS SHOULD BE EXAMINED AND CONSTRUCTION METHODS DISCUSSED PRIOR TO BEGINNING EXCAVATION. WATER MAINS IN BERGIN WAY ARE TRANSITE. THE CONTRACTOR SHALL TAKE EXTRA PRECAUTIONS TO PROTECT TRANSITE WATER MAINS DURING CONSTRUCTION.
- STEEL PLATES - THE USE OF STEEL PLATES SERVING AS A TEMPORARY TRENCH COVER SHALL ONLY BE USED WITHIN CLOSED TRAVEL LANES. THE USE OF STEEL PLATES WITHIN CLOSED TRAVEL LANES SERVING AS A TEMPORARY TRENCH COVER SHALL HAVE ASPHALT RAMPS CONSTRUCTED AROUND THE PERIMETER OF THE PLATE(S) FOR EMERGENCY VEHICLES AND CONSTRUCTION VEHICLES. WARNING SIGNS MUST BE APPROPRIATELY PLACED TO CAUTION MOTORISTS. STEEL PLATES WILL NOT BE ALLOWED IF SNOW OR FREEZING TEMPERATURES ARE EXPECTED.

## CONCRETE & PAVEMENT NOTES

- PORTLAND CEMENT CONCRETE SHALL MEET THE REQUIREMENTS OF SPECIFICATION SECTION 202.00. PC CONCRETE EXPOSED TO FREEZE-THAW ENVIRONMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND MEET THE SPECIFIC REQUIREMENTS OF SPECIFICATION SECTION 337.10.01.01.
- ASPHALT CEMENT CONCRETE SHALL MEET THE REQUIREMENTS OF SPECIFICATION SECTION 320.00 AND THE FOLLOWING:
  - MARSHALL METHOD OF MIX DESIGN - 50 BLOWS, 3% VOIDS.
  - TYPE 2 AGGREGATE PER SPECIFICATION SECTION 200.00.
  - ASPHALT CEMENT SHALL BE PG 64-28NV.
- TEMPORARY PAVEMENT SHALL MEET THE REQUIREMENTS OF ASTM D4215, PLACE COLD MIX, COLD LAID BITUMINOUS PAVING MIXTURE IN ACCORDANCE WITH ASTM D4215 IMMEDIATELY FOLLOWING BACKFILLING AND COMPACTION OF TRENCHES THROUGH EXISTING PAVEMENTS. THE CONTRACTOR SHALL MAINTAIN PAVEMENT IN A SAFE AND SMOOTH CONDITION UNTIL FINAL PAVEMENT CAN BE PLACED, TO THE SATISFACTION OF THE ENGINEER.
- CURB, GUTTER AND SIDEWALK SHALL BE PLACED IN ACCORDANCE WITH SPECIFICATION SECTION 312.00.
- CONCRETE PAVEMENTS SHALL BE PLACED IN ACCORDANCE WITH SPECIFICATION SECTION 314.00.
- ASPHALT CONCRETE PAVEMENT SHALL BE PLACED IN ACCORDANCE WITH SPECIFICATION SECTION 320.00.

## UTILITY OWNERSHIP

SANITARY SEWER	- CITY OF SPARKS
STORM DRAIN	- CITY OF SPARKS
WATER	- TMWA
GAS	- NV ENERGY
ELECTRIC	- NV ENERGY
TELEPHONE	- AT&T
CABLE TV	- CHARTER

LEGEND	
	EXISTING CURB & GUTTER
	PROPOSED CURB & GUTTER
	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED 5' CONTOUR
	SAWCUT
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING SANITARY SEWER
	EXISTING STORM DRAIN
	EXISTING ELECTRIC
	EXISTING GAS
	EXISTING TELEPHONE
	EXISTING OVERHEAD LINES
	EXISTING CABLE
	EXISTING FIBER OPTIC
	EXISTING WATER LINE
	EXISTING WATER AND GAS LINE
	EXISTING PCC DRIVEWAY
	EXISTING CHAINLINK FENCE
	EXISTING CONCRETE
	PROPOSED CONCRETE
	PROPOSED PRIVATE ASPHALT PAVING
	PROPOSED PUBLIC ASPHALT PAVING
	PROPOSED GRIND AND OVERLAY ASPHALT PAVING
	EXISTING STREET SIGN
	EXISTING STREET LIGHTING AND TRAFFIC SIGNAL
	EXISTING FIRE HYDRANT
	EXISTING FIRE DEPARTMENT CONNECTIONS
	EXISTING SURVEY MONUMENT
	EXISTING POWER POLE
	EXISTING TRANSFORMER PAD
	EXISTING ELECTRIC VAULT
	EXISTING TELEPHONE VAULT
	EXISTING SANITARY SEWER MANHOLE
	EXISTING STORM DRAIN MANHOLE
	EXISTING ELECTRIC MANHOLE
	EXISTING UTILITY MANHOLE
	EXISTING GAS VALVE
	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING TYPE 1 CATCH BASIN
	EXISTING TYPE 4R CATCH BASIN
	EXISTING TREE
	TEST PIT
	EXISTING GRADE
	FINISH GRADE
	CENTERLINE
	PROPOSED STORM DRAIN MANHOLE
	PROPOSED STORM DRAIN CATCH BASIN
	PROPOSED STORM DRAIN

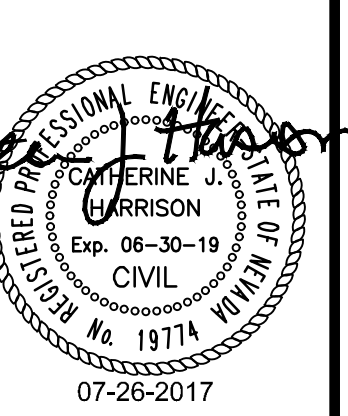
## SHEET INDEX:

	TITLE SHEET
C1.0	GENERAL NOTES
C2.0	SITE PLAN
C2.1	GRADING PLAN
C3.0	UTILITY PLAN INDEX
C3.1	UTILITY PLAN & PROFILE
C3.2	UTILITY PLAN & PROFILE
C3.3	UTILITY PLAN & PROFILE
C4.0	DETAILS
C4.1	DETAILS
C4.2	DETAILS
C4.3	DETAILS
C4.4	DETAILS

BID SET

NO.	DATE	MARK	REVISIONS	BY

PROFESSIONAL SEAL:



**ENGINEERS - LAND SURVEYORS**  
**PLANNERS - LANDSCAPE ARCHITECTS**  
 1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502  
 775-866-1150 MAIN ■ 775-866-1160 FAX ■ CHARENDO.COM

BERGIN WAY STORM DRAIN

GENERAL NOTES

NEVADA

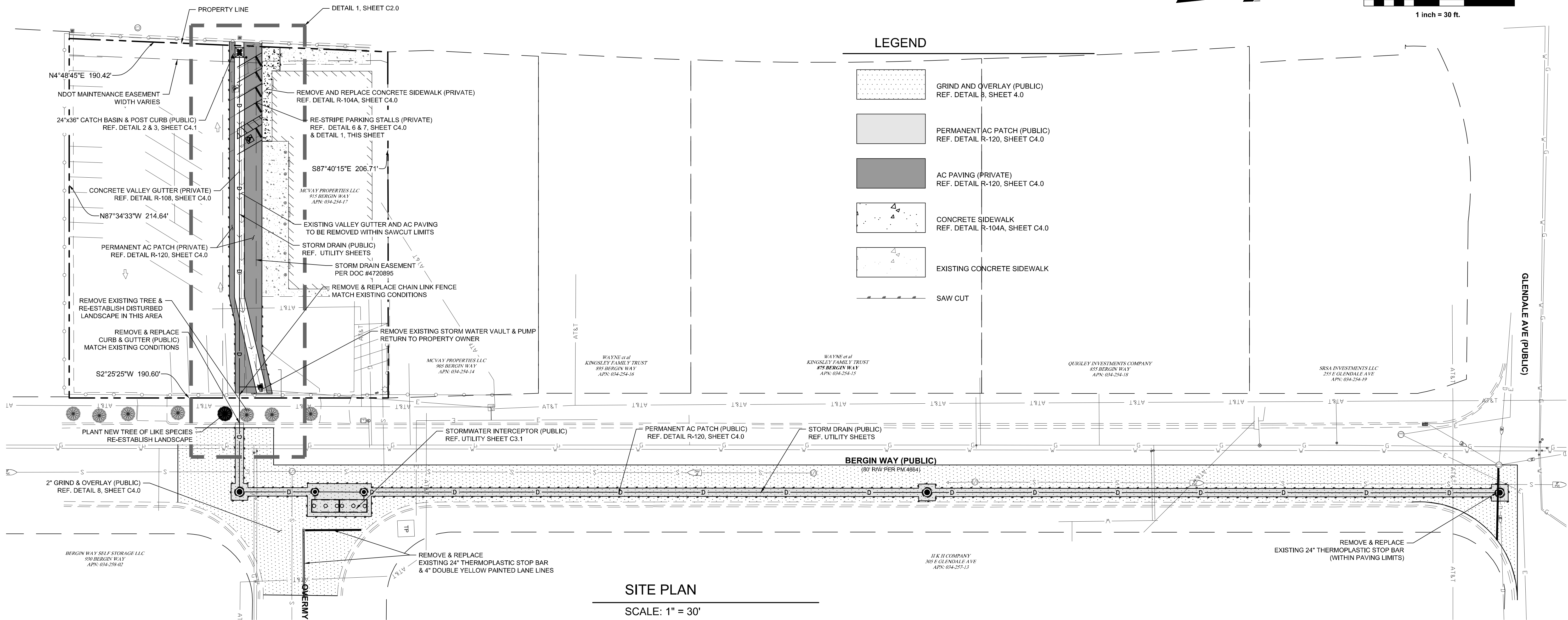
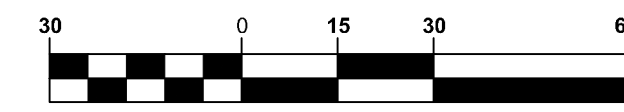
SPARKS

JOB NO.	16036.00
BY	AE
DATE	07-26-2017

SHEET	C1.0	13
OF		

**SOUTH MCCARRAN BLVD**  
(NDOT RW WIDTH VARIES PER PROJECT NOS LPN 435 & STP-650(7))

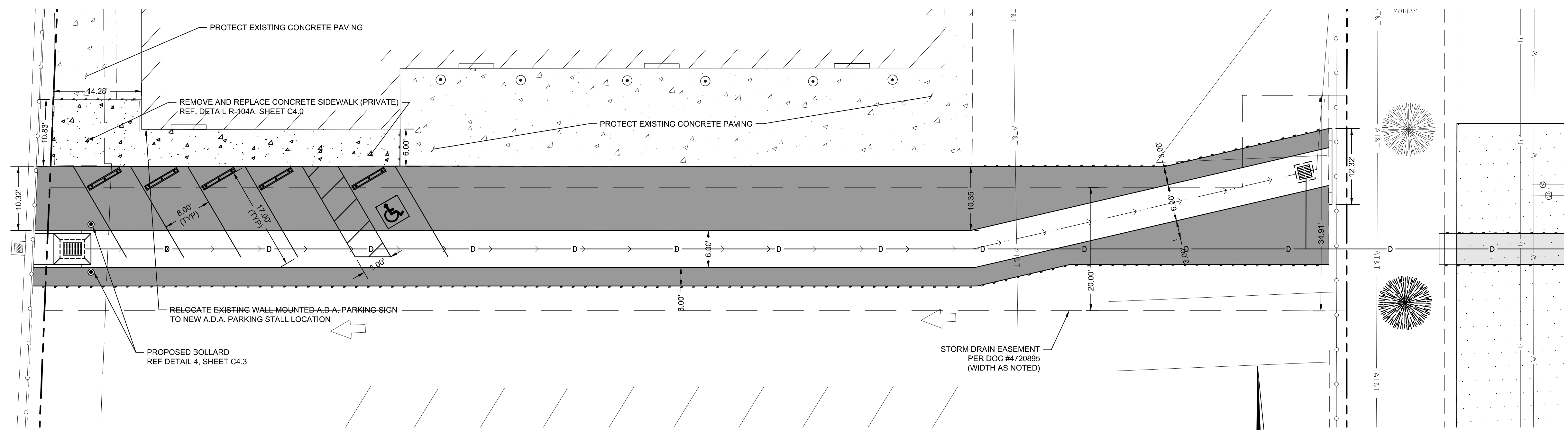
GRAPHIC SCALE



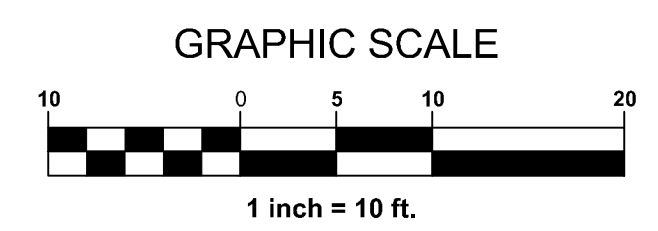
**LEGEND**

	GRIND AND OVERLAY (PUBLIC) REF. DETAIL B, SHEET 4.0
	PERMANENT AC PATCH (PUBLIC) REF. DETAIL R-120, SHEET C4.0
	AC PAVING (PRIVATE) REF. DETAIL R-120, SHEET C4.0
	CONCRETE SIDEWALK REF. DETAIL R-104A, SHEET C4.0
	EXISTING CONCRETE SIDEWALK
	SAW CUT

**SITE PLAN**  
SCALE: 1" = 30'



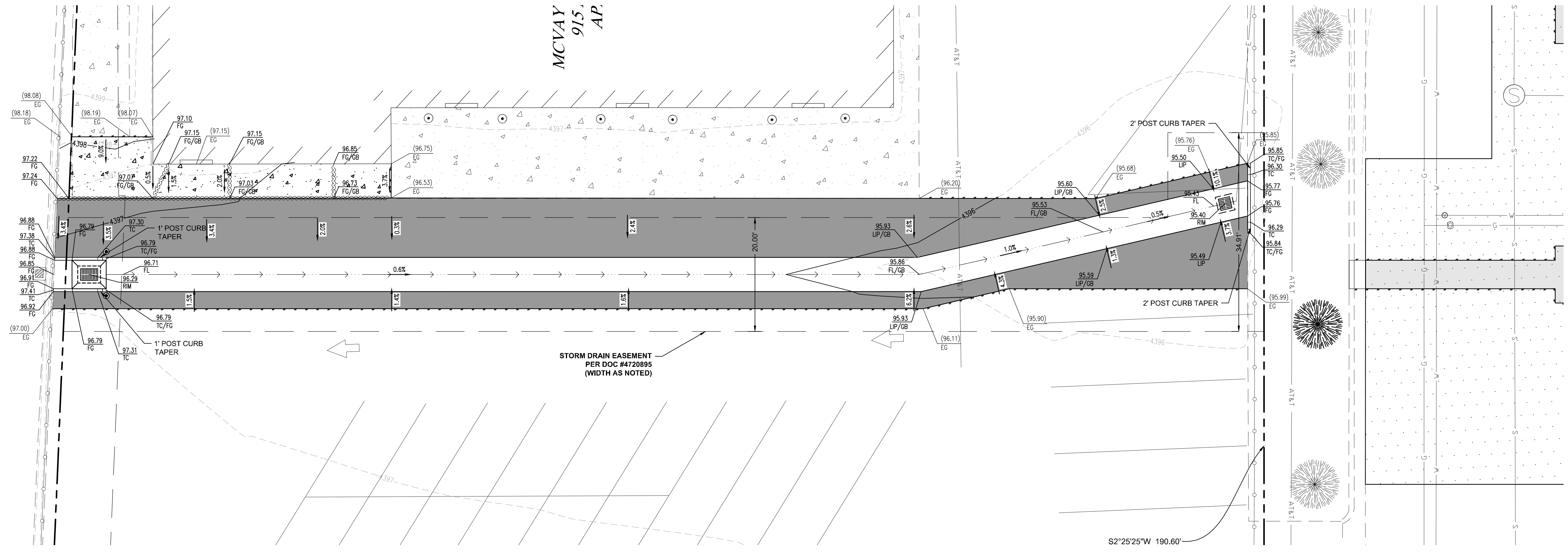
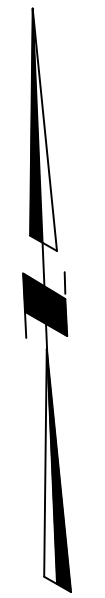
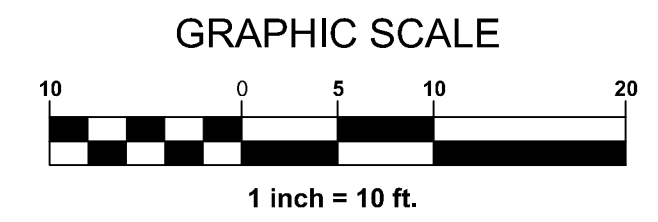
**1**  
**C2.0** **PARKING LOT GEOMETRY**  
SCALE: 1" = 10'



**CAUTION - NOTICE TO CONTRACTOR**

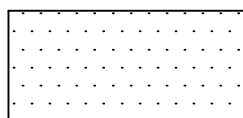



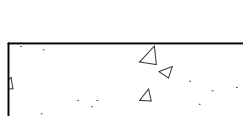


1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES AS SHOWN ON THESE PLANS IS BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE LOCATIONS AND/OR ELEVATIONS AT THE PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, HE SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE OR RELOCATE ALL EXISTING UTILITIES AND FEATURES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. CONTRACTOR SHALL OBTAIN APPROVALS FROM THE GOVERNING AGENCIES, THE ENGINEER, AND THE UTILITY COMPANIES PRIOR TO SUCH REMOVAL AND/OR RELOCATION.
4. THE CONTRACTOR ASSUMES ALL RISK FOR ANY CONSTRUCTION PERFORMED WITH PRELIMINARY OR NONAPPROVED PLANS.
5. CONTRACTOR TO PROVIDE TRAFFIC CONTROL IN CONFORMANCE WITH THE LATEST EDITION OF MUTCD WHENEVER CONSTRUCTION IS IN PROGRESS WITHIN THE PUBLIC TRAVEL WAY.

BY	
REVISIONS	
DATE	
MARK	
DATE	
PROFESSIONAL SEAL:	
<p><b>ENGINEERS - LAND SURVEYORS</b> <b>PLANNERS - LANDSCAPE ARCHITECTS</b> 1150 CORPORATE BOULEVARD • RENO, NEVADA 89502 775-856-1150 MAIN • 775-856-1160 FAX • CHARENDO.COM</p>	
NEVADA	
SPARKS	
BID SET	
BERGIN WAY STORM DRAIN	
SITE PLAN	
JOB NO.	16036.00
BY	AE
DATE	07-26-2017
SHEET	C2.0
OF	13



**GRADING PLAN**  
SCALE: 1" = 10'

**LEGEND**

-  GRIND AND OVERLAY (PUBLIC)  
REF. DETAIL 8, SHEET 4.0
-  PERMANENT AC PATCH (PUBLIC)  
REF. DETAIL R-120, SHEET C4.0
-  AC PAVING (PRIVATE)  
REF. DETAIL R-120, SHEET C4.0
-  CONCRETE SIDEWALK  
REF. DETAIL R-104A, SHEET C4.0
-  EXISTING CONCRETE SIDEWALK
-  SAW CUT
-  PERMANENT STORM DRAIN EASEMENT  
PER DOC #4720895

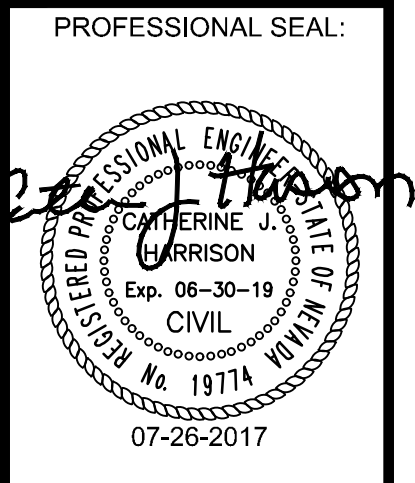


**CAUTION - NOTICE TO CONTRACTOR**


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- CONTRACTOR TO PROVIDE TRAFFIC CONTROL IN CONFORMANCE WITH THE LATEST EDITION OF MUTCD WHENEVER CONSTRUCTION IS IN PROGRESS WITHIN THE PUBLIC TRAVEL WAY.

BID SET

NO.	DATE	MARK	REVISIONS	BY



**ENGINEERS - LAND SURVEYORS**  
**PLANNERS - LANDSCAPE ARCHITECTS**  
1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502  
775-866-1150 MAIN ■ 775-866-1160 FAX ■ CHARENDO.COM



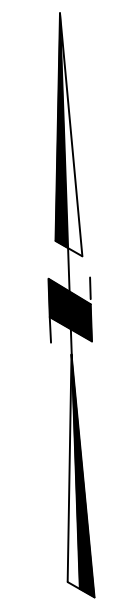
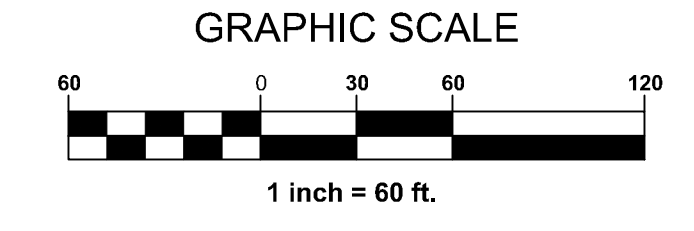
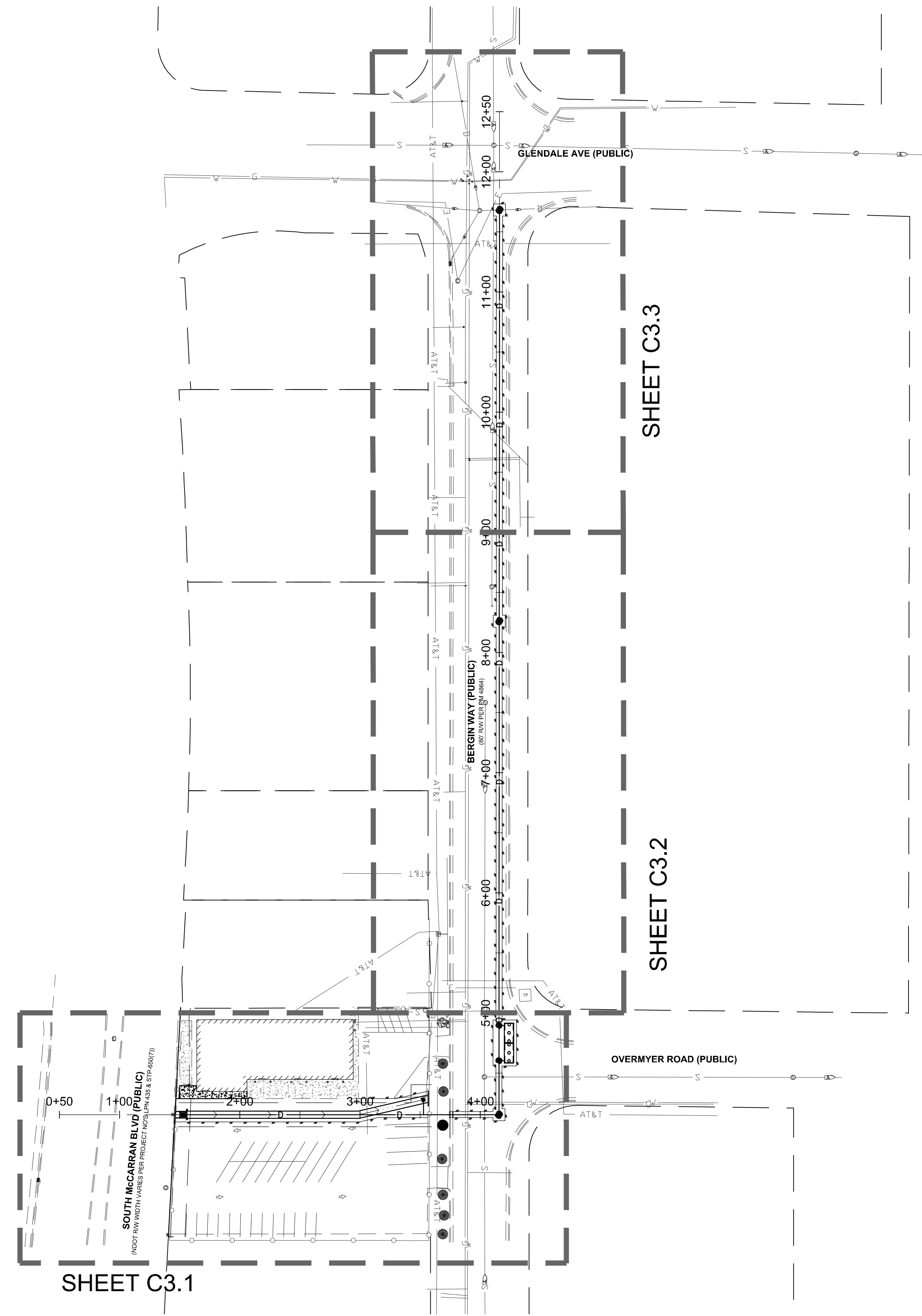
NEVADA

BERGIN WAY STORM DRAIN

**GRADING PLAN**

SPARKS

JOB NO. 16036.00  
BY AE  
DATE 07-26-2017  
SHEET C2.1  
13 OF



SHEET C3.1

SHEET C3.2

SHEET C3.3

UTILITY PLAN INDEX  
SCALE: 1" = 60'

BID SET



**CAUTION - NOTICE TO CONTRACTOR**

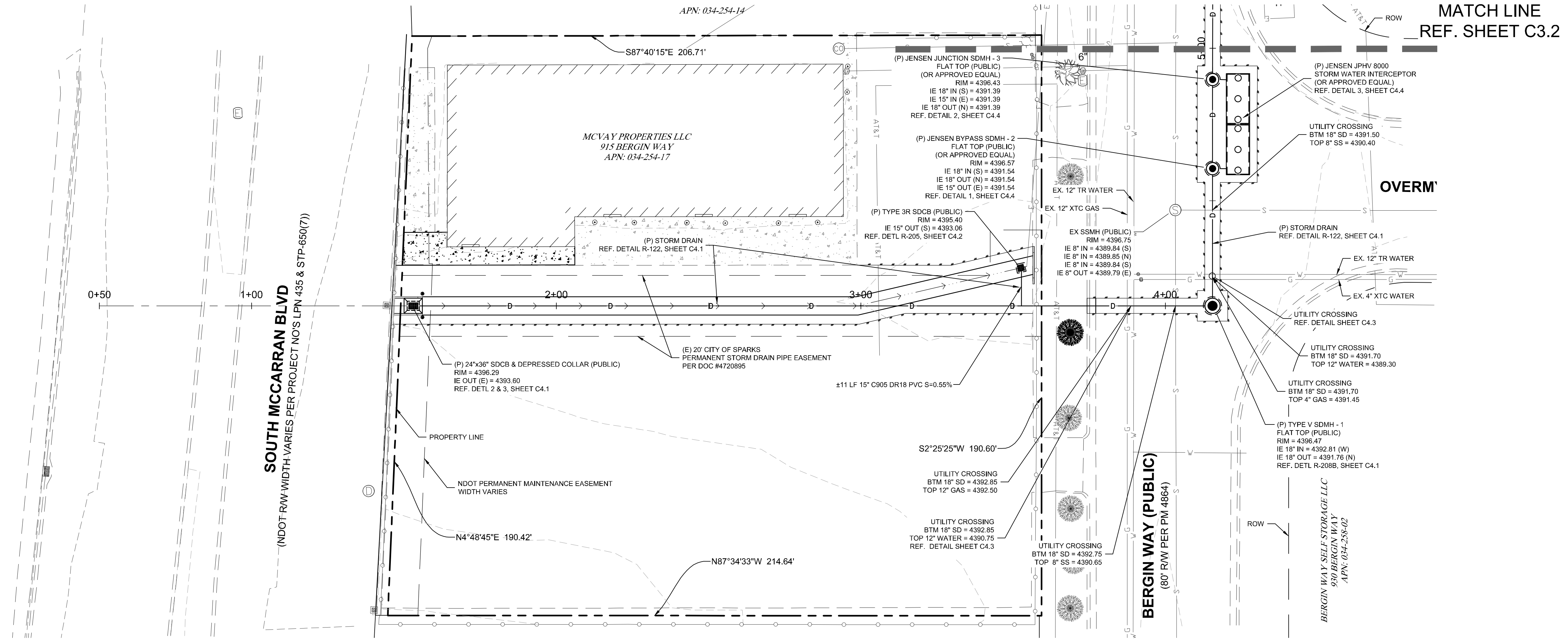
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NO.	DATE	MARK	REVISIONS	BY

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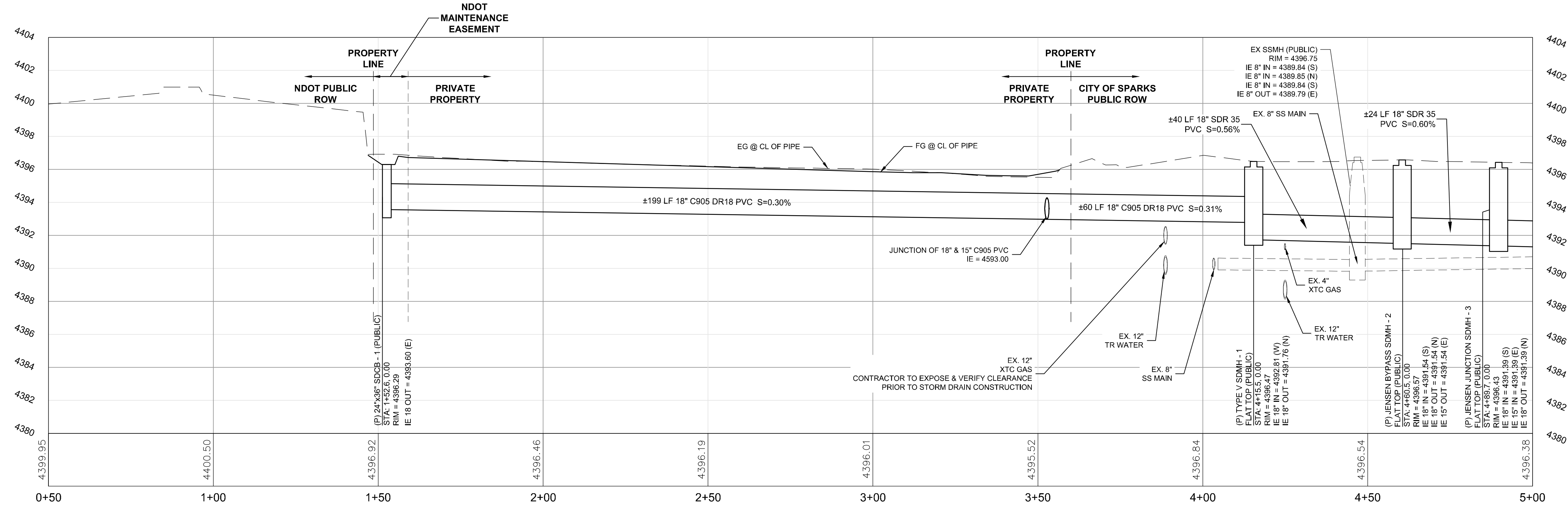
**ENGINEERS - LAND SURVEYORS**  
**PLANNERS - LANDSCAPE ARCHITECTS**  
 1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502  
 775-866-1150 MAIN ■ 775-866-1160 FAX ■ CHARENDO.COM

NEVADA  
 SPARKS  
 BERGIN WAY STORM DRAIN  
**UTILITY PLAN INDEX**  
 JOB NO. 16036.00  
 BY AE  
 DATE 07-26-2017  
 SHEET  
**C3.0**  
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 OF



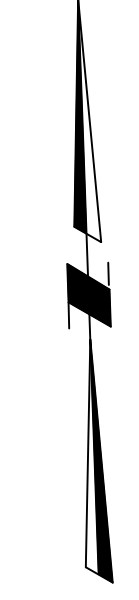
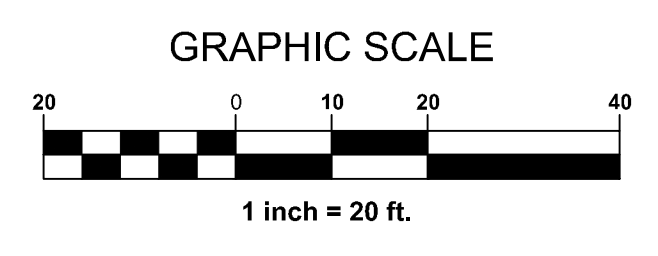
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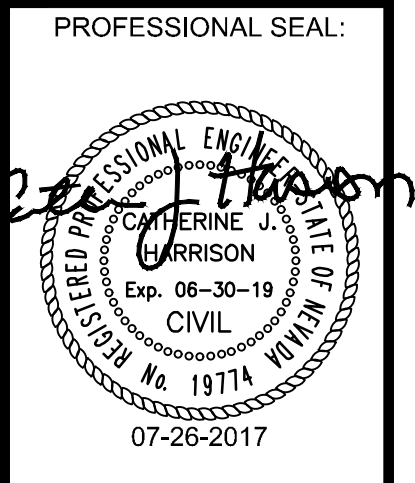


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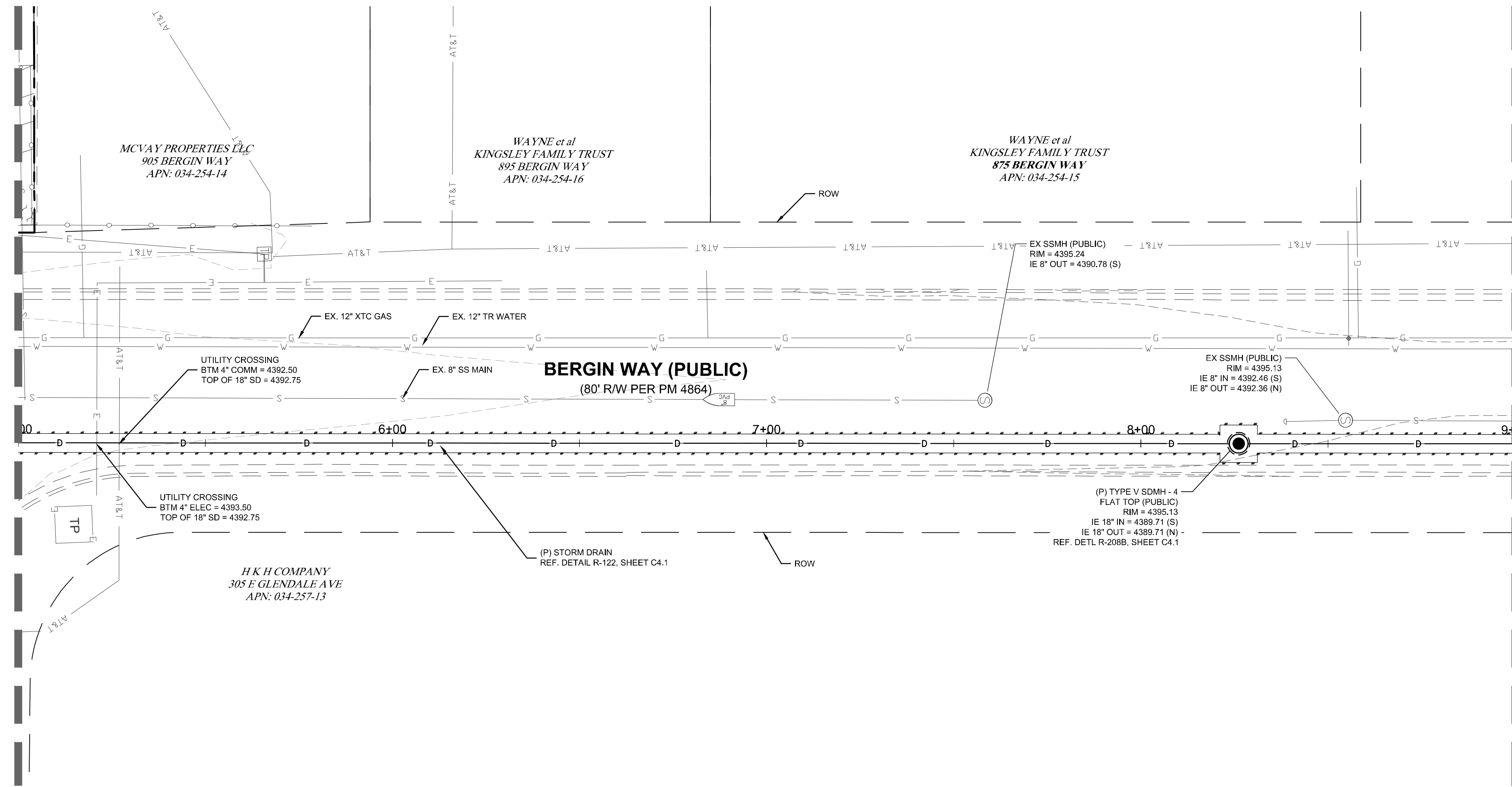
BERGIN WAY STORM DRAIN

**UTILITY PLAN & PROFILE**  
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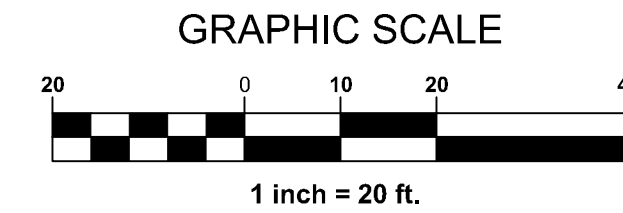
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JOB NO. 16036.00  
 BY AE  
 DATE 07-26-2017  
 SHEET **C3.1**  
 OF 13

MATCH LINE  
REF. SHEET C3.1

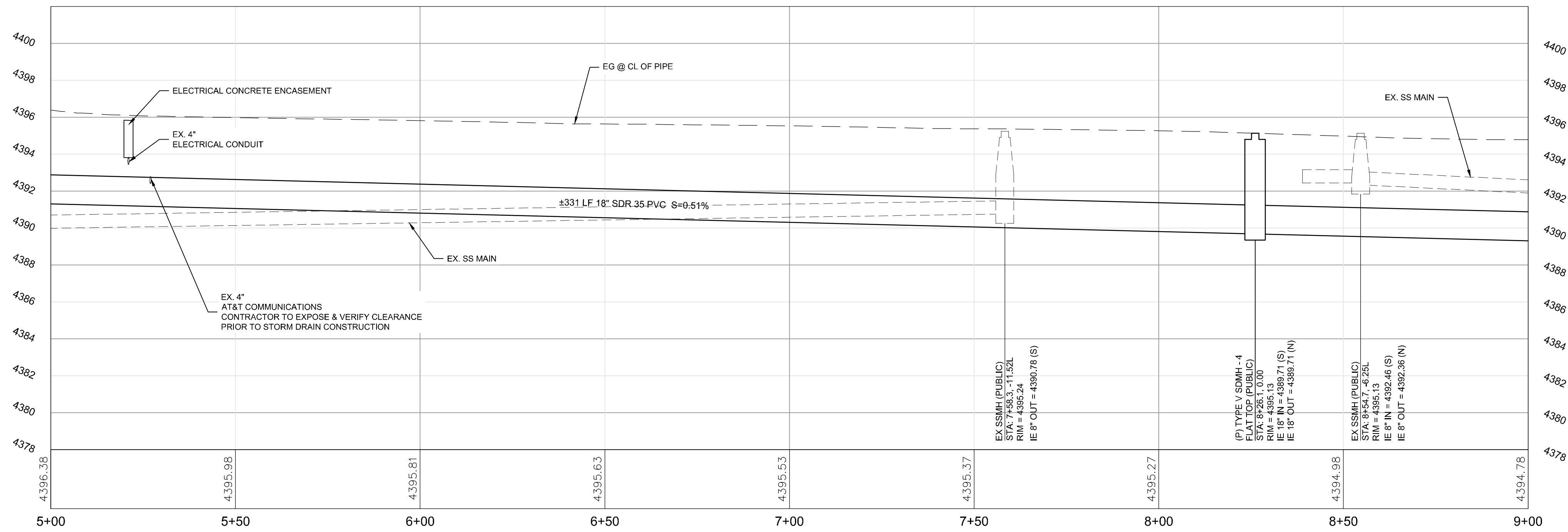


MATCH LINE  
REF. SHEET C3.3



**PLAN & PROFILE - STA: 5+00 TO 9+00**

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V: 1"=4'



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NO.	DATE	MARK	REVISIONS	BY



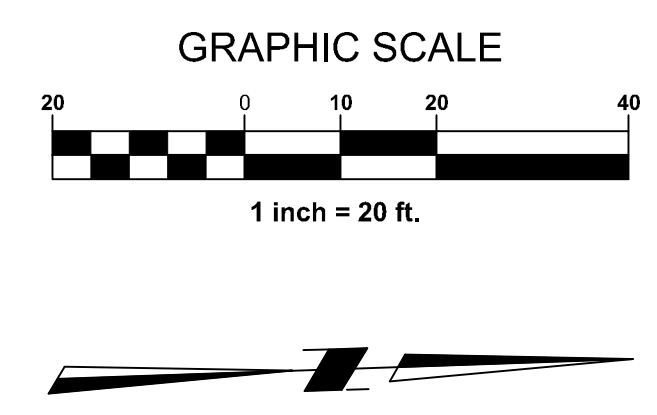
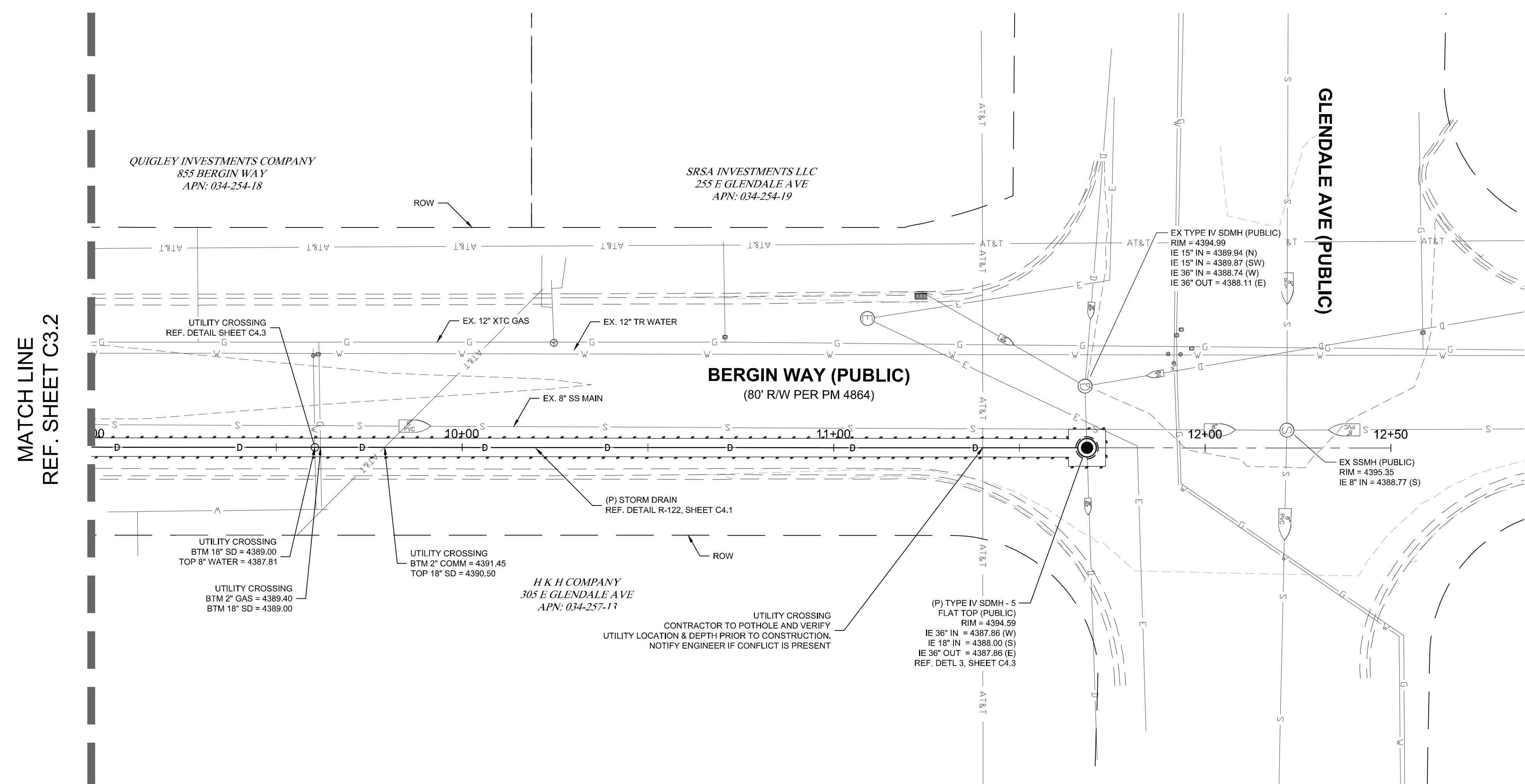
**ENGINEERS - LAND SURVEYORS**  
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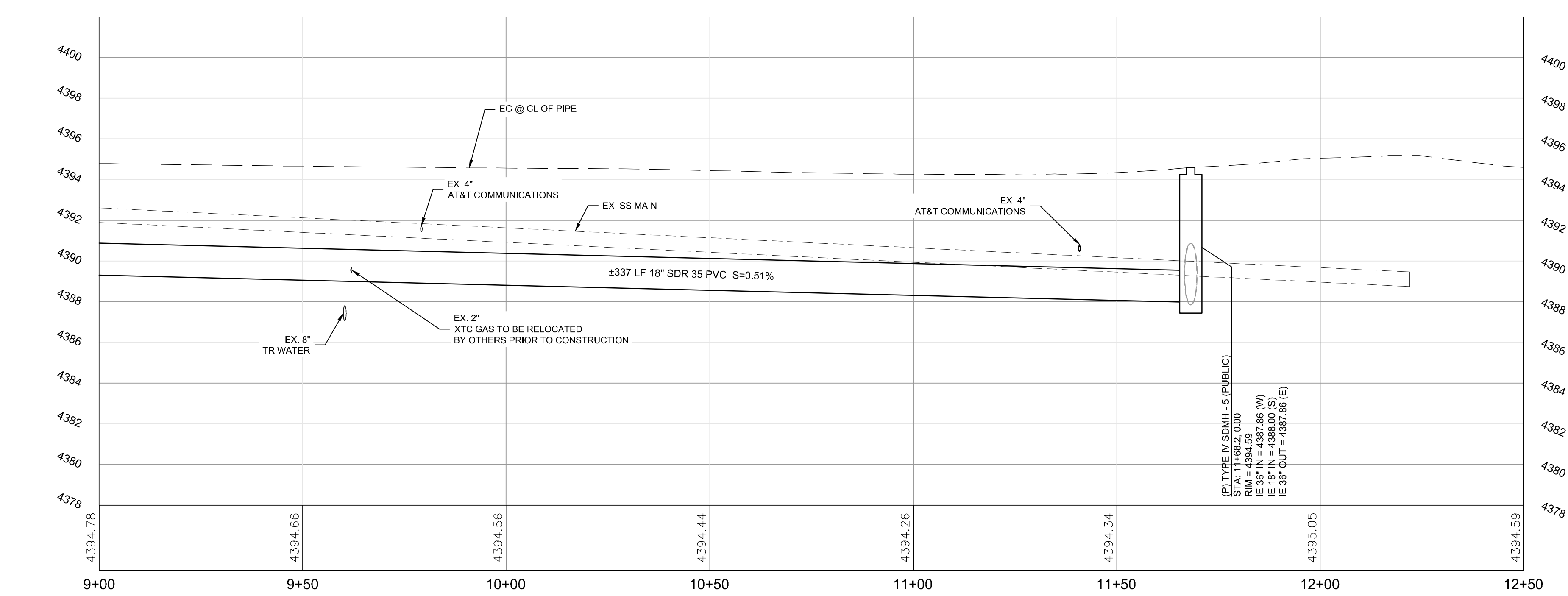
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NEVADA  
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**UTILITY PLAN & PROFILE**  
 STA: 5+00 TO 9+00  
 JOB NO. 16036.00  
 BY AE  
 DATE 07-26-2017  
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**C3.2**  
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**PLAN & PROFILE - STA: 9+00 TO 12+50**

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V: 1"=4'



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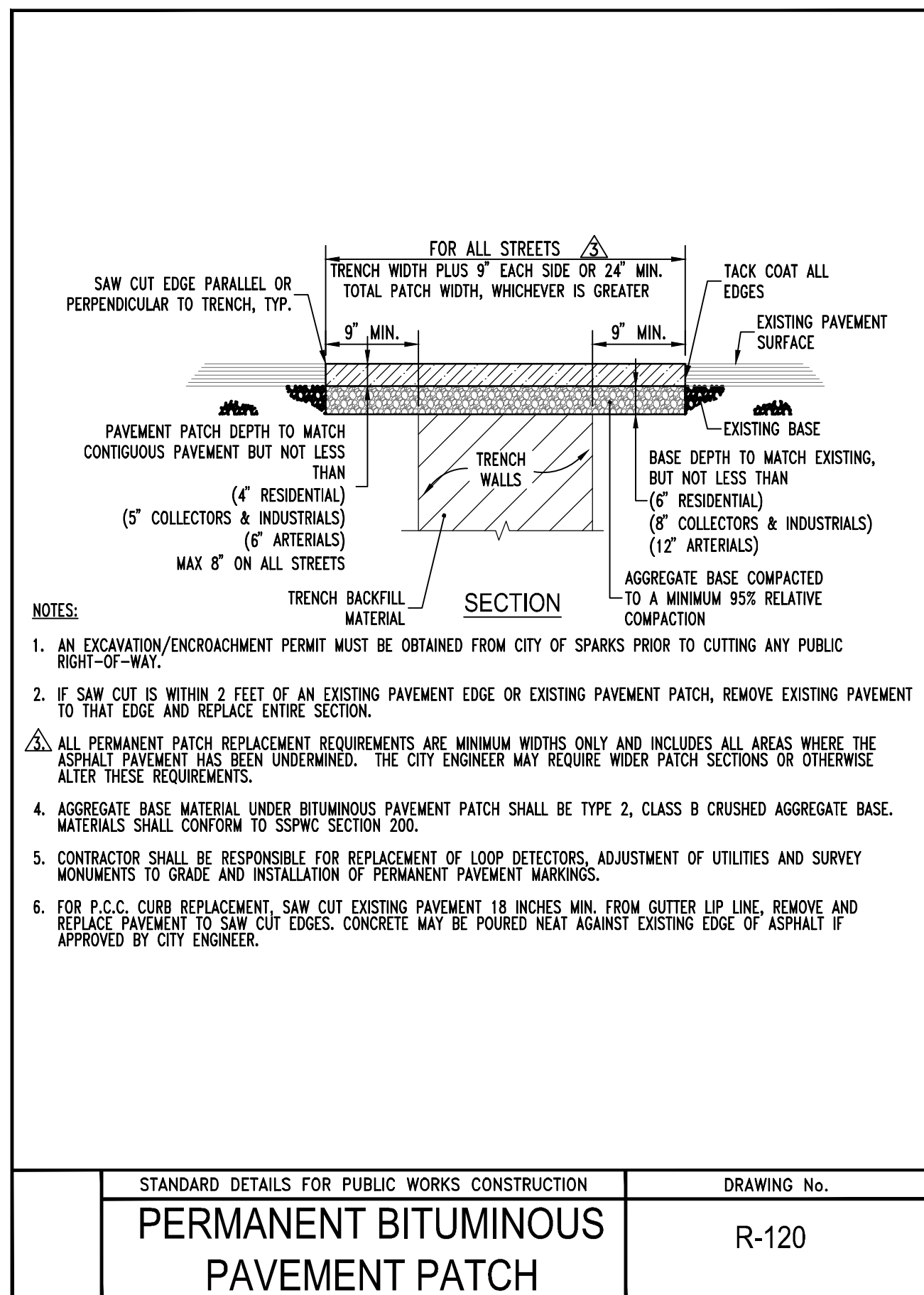
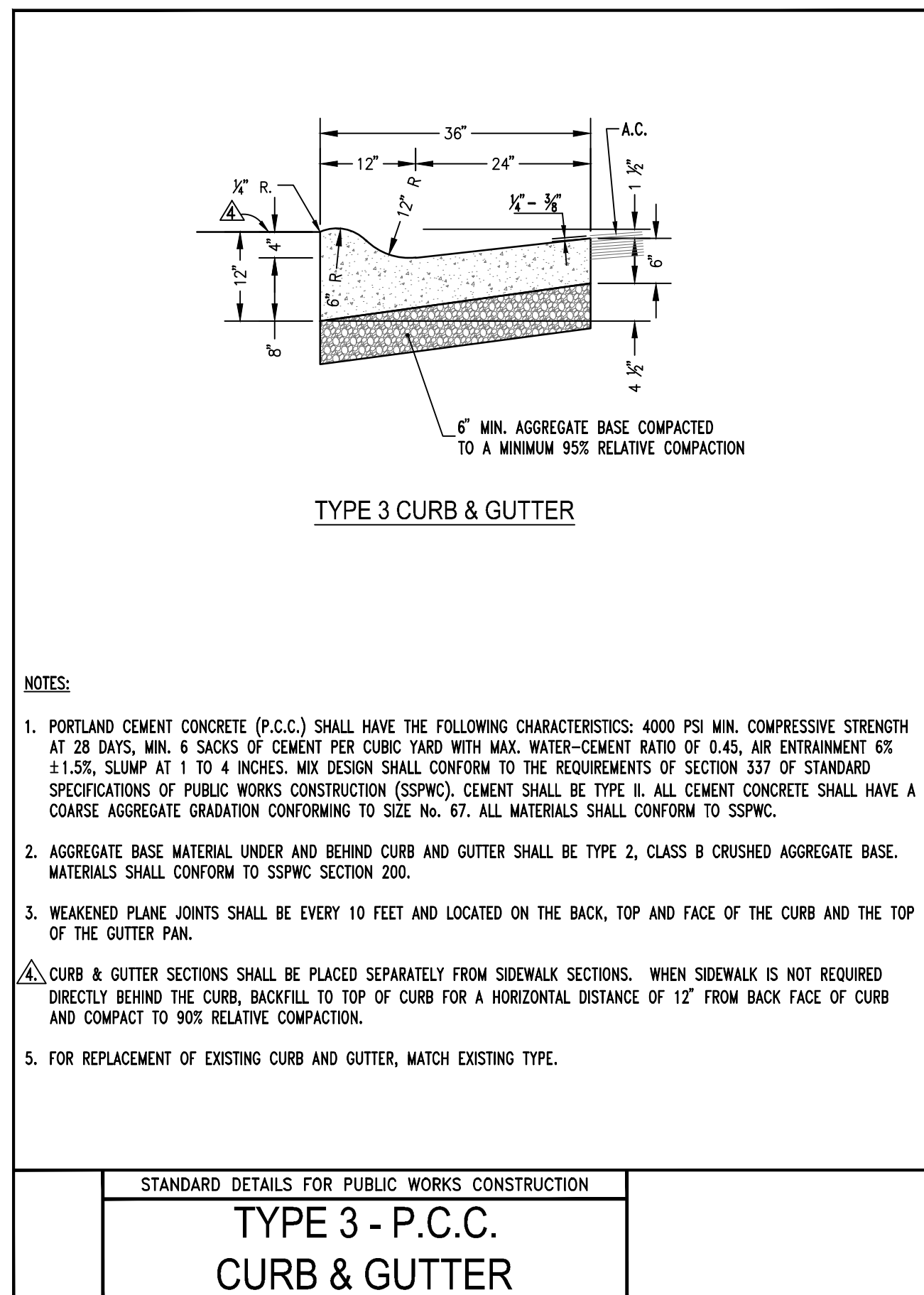
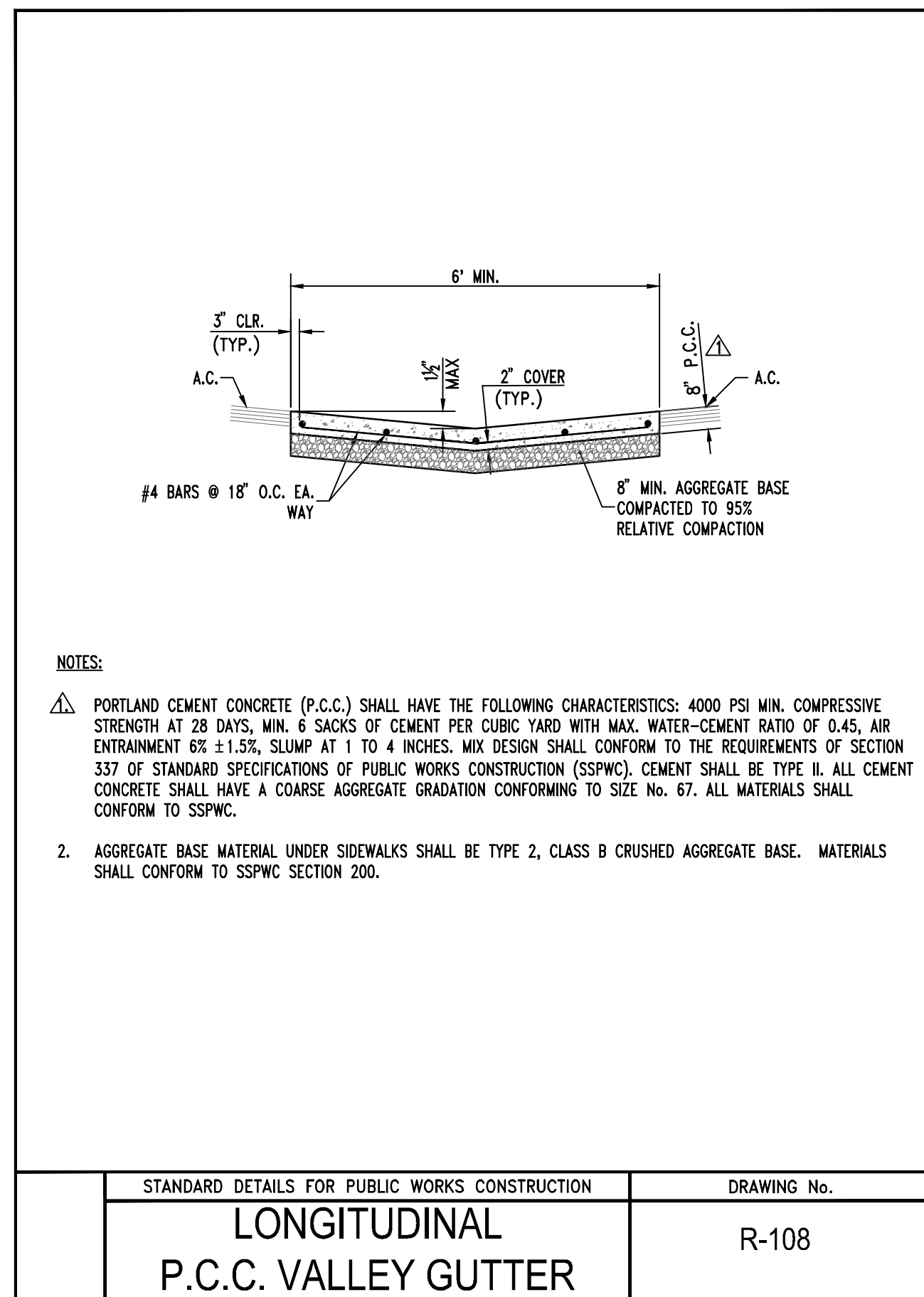
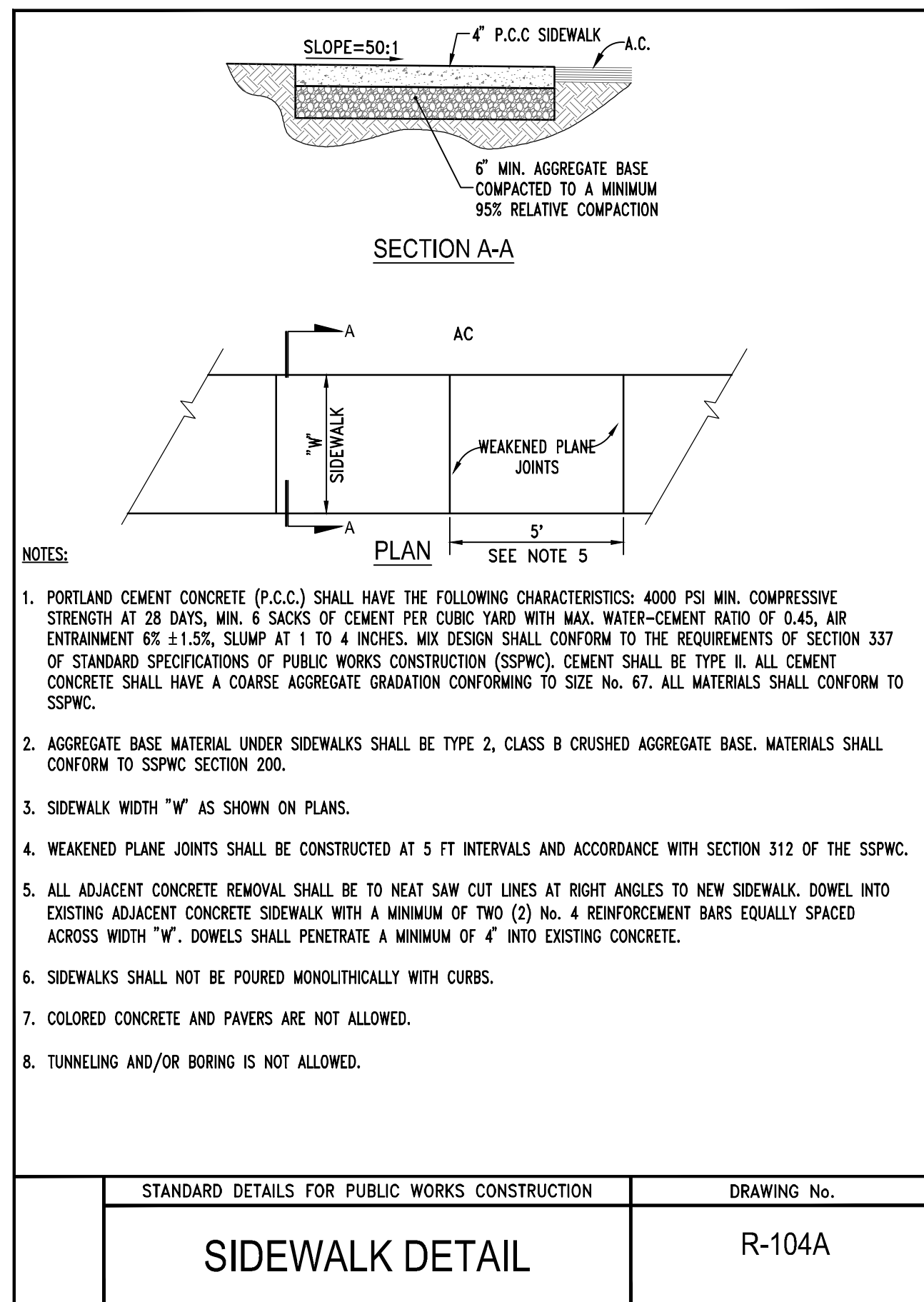


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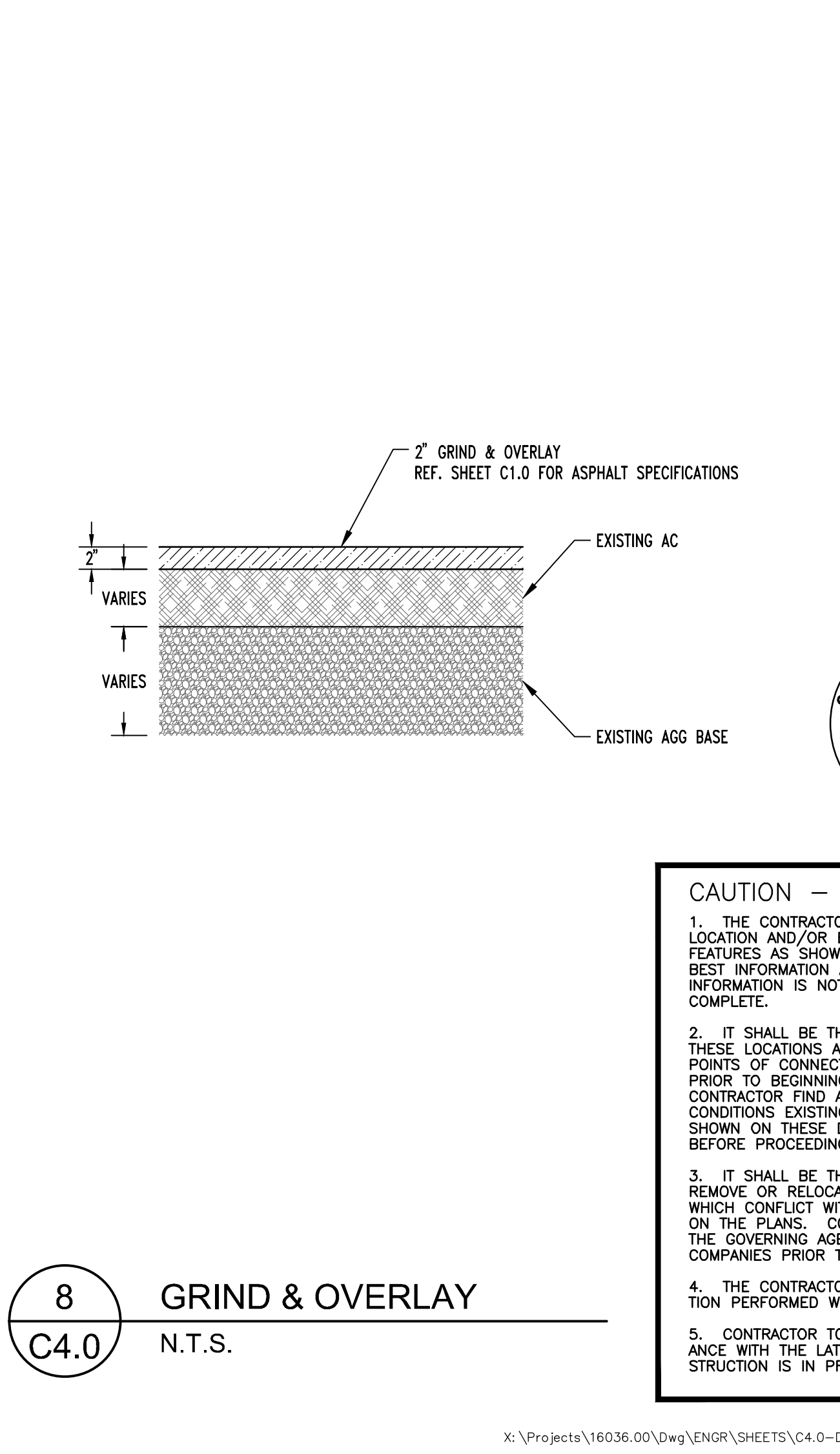
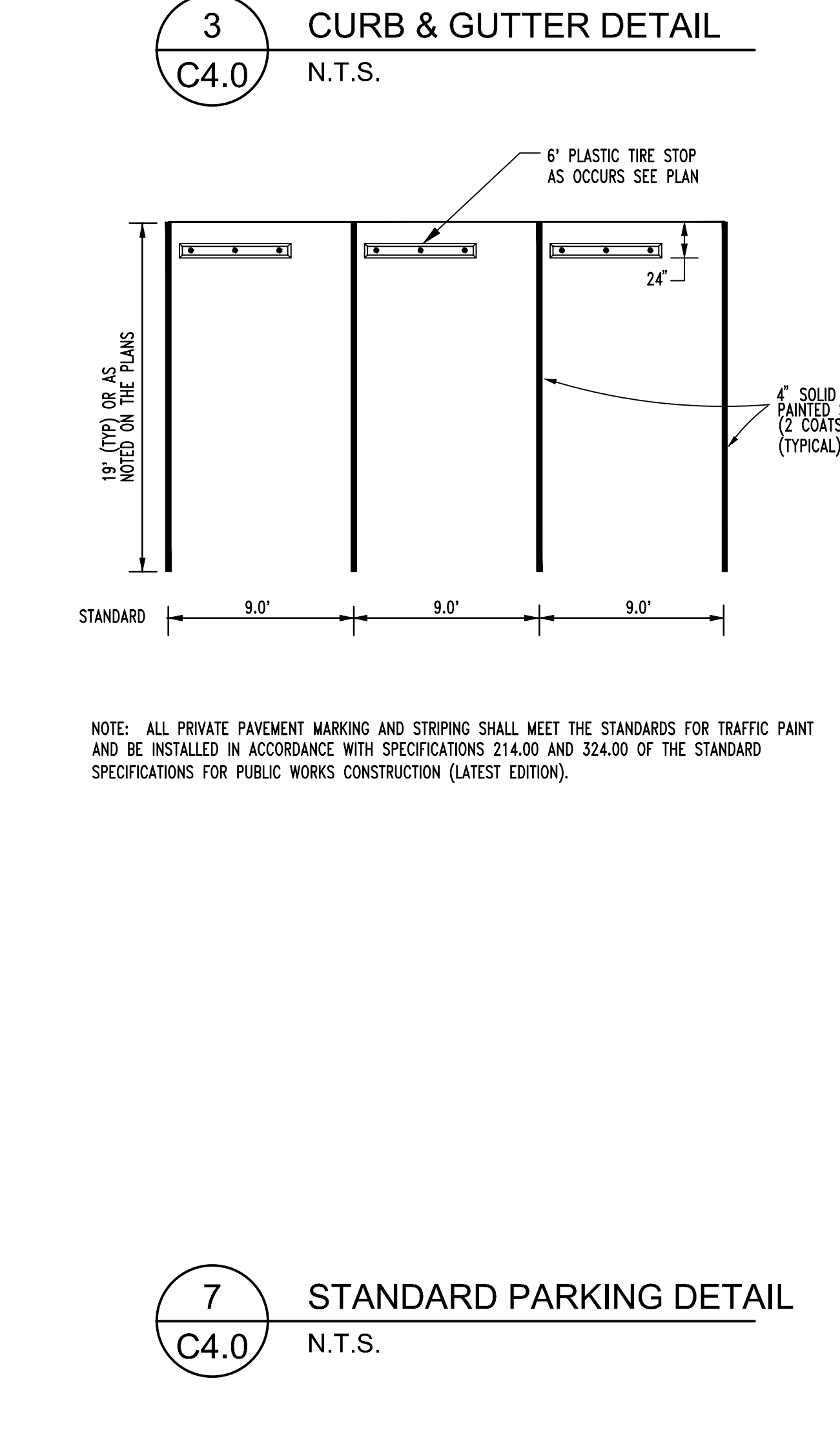
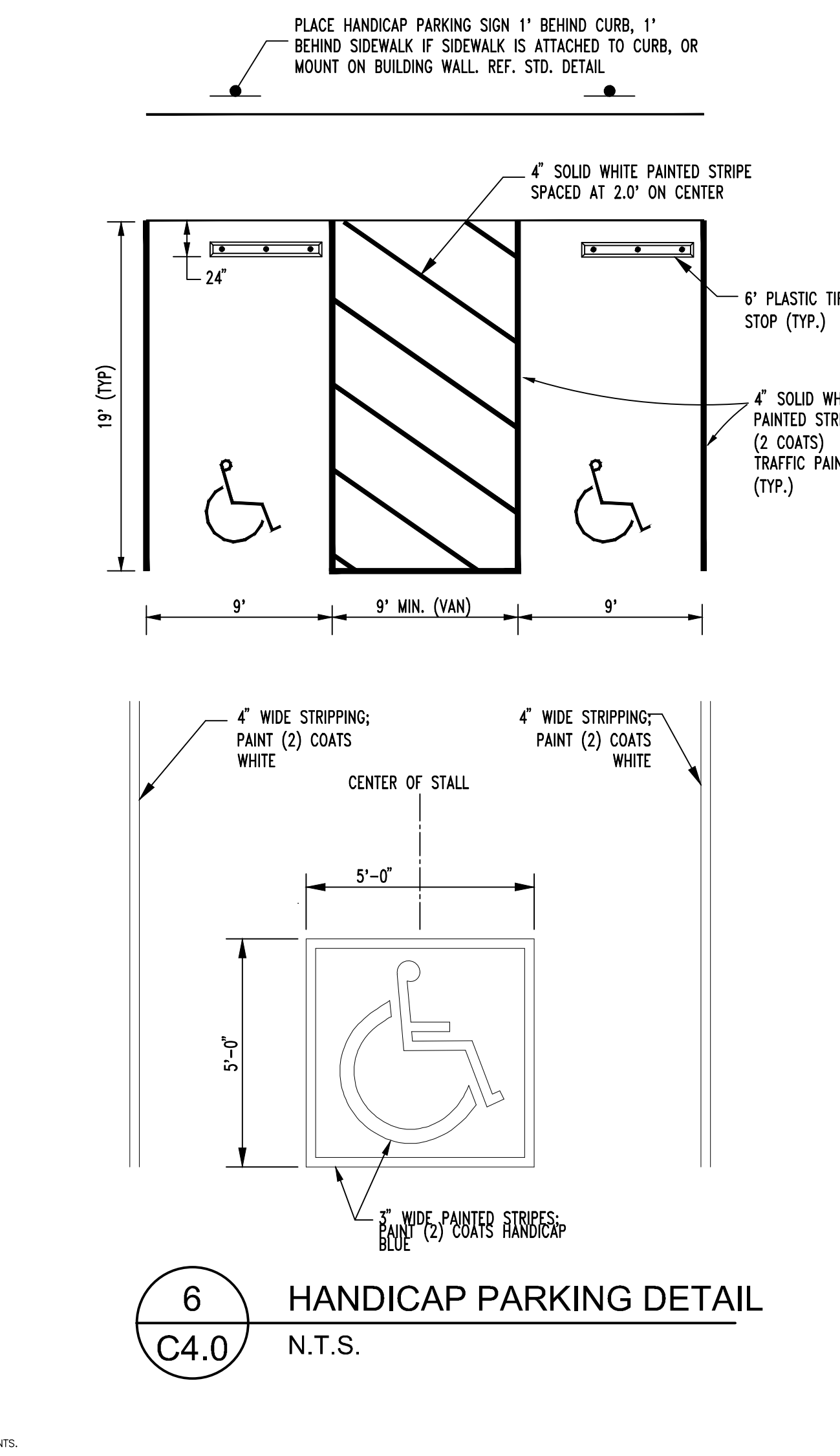
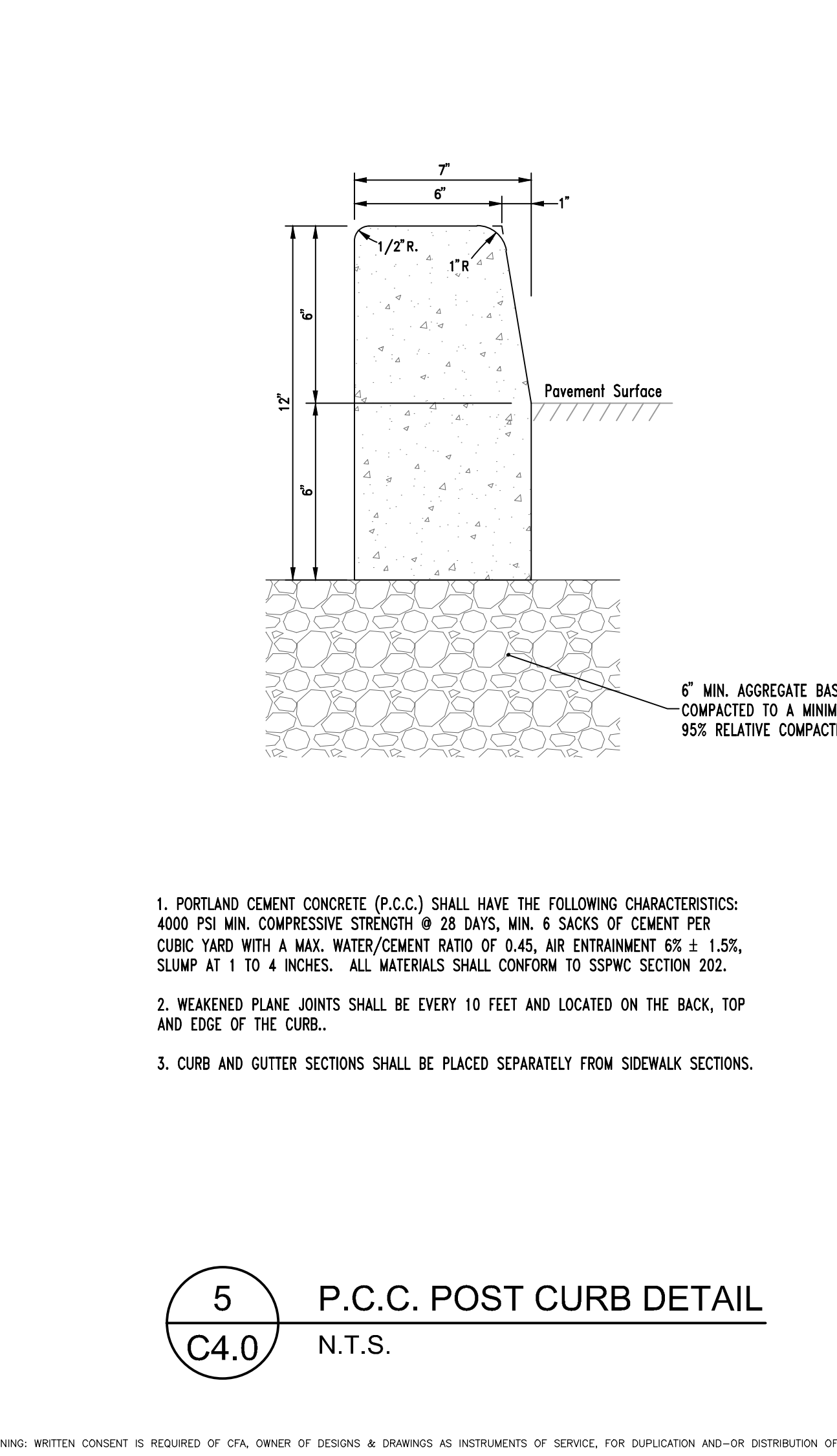
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	BY
	REVISIONS
	MARK
	DATE
PROFESSIONAL SEAL:	
<p><b>ENGINEERS - LAND SURVEYORS</b>  <b>PLANNERS - LANDSCAPE ARCHITECTS</b>          1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502          775-856-1150 MAIN ■ 775-856-1160 FAX ■ CHARENCO.COM</p>	
NEVADA	
<b>UTILITY PLAN &amp; PROFILE</b> STA: 9+00 TO 12+50	
SPARKS	
JOB NO. 16036.00	BY AE
DATE 07-26-2017	DATE
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 1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502  
 775-856-1150 MAIN ■ 775-856-1160 FAX ■ CHARENDO.COM  
 Exp. 06-30-19  
 No. 19174  
 07-26-2017

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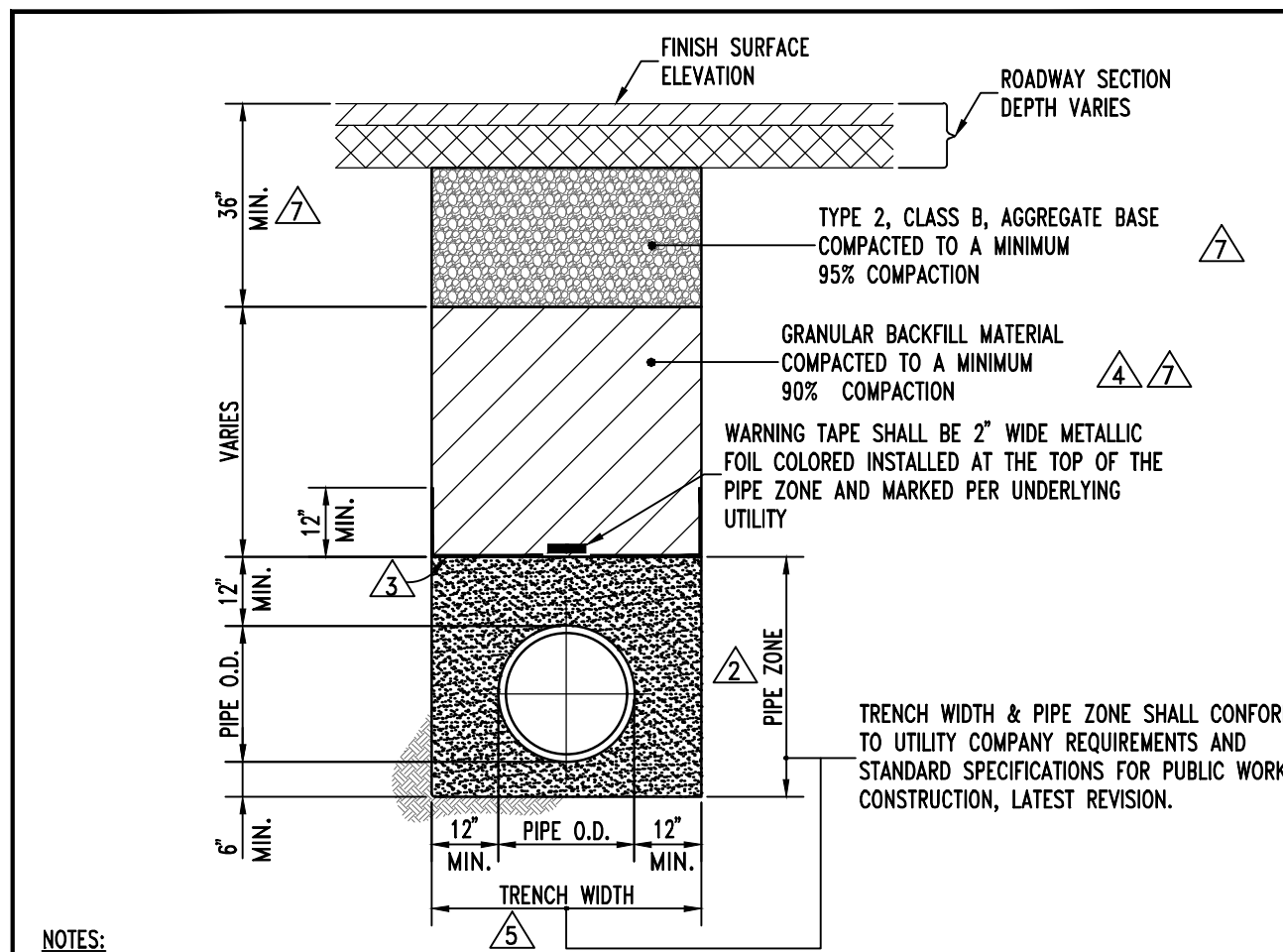
NEVADA

BERGIN WAY STORM DRAIN

**DETAILS**

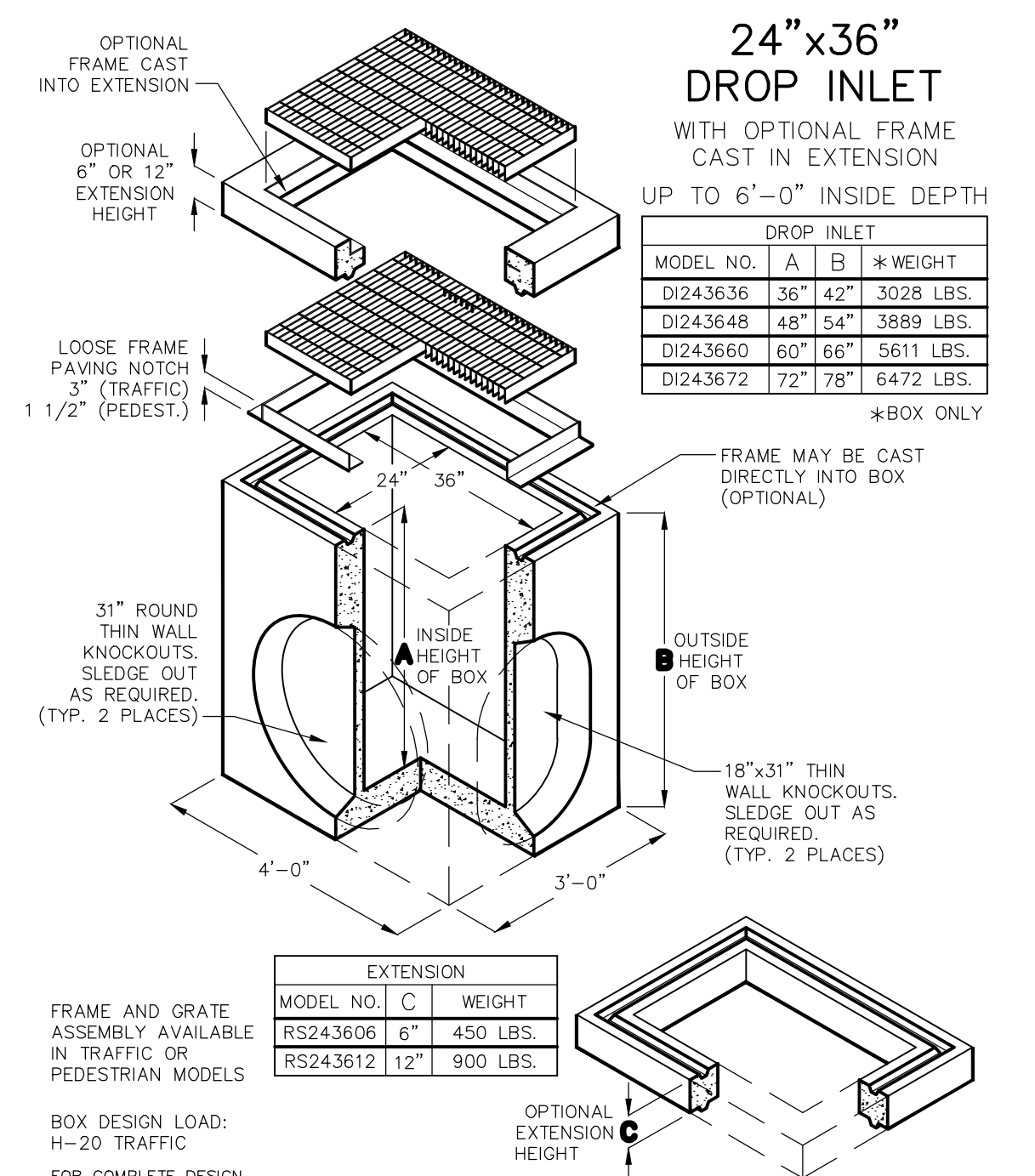
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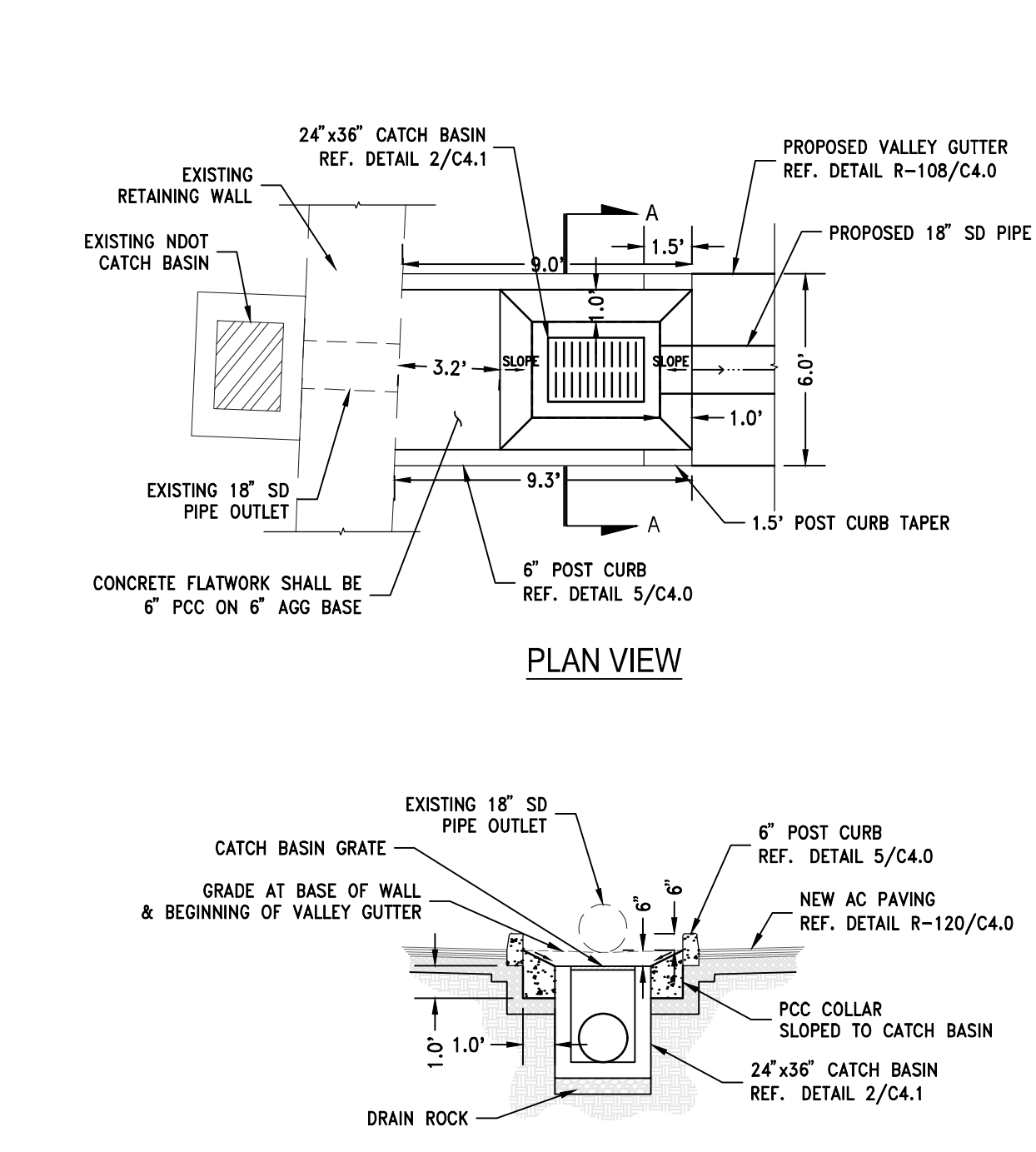


- NOTES:
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPW), LATEST REVISION.
  - BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY-OWNED UTILITIES, BEDDING MATERIAL SHALL BE CLASS A OR C, COMPACTED TO MINIMUM 90% COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
  - CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAF 1800 OR APPROVED EQUAL.
  - BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
  - ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
  - EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED.
  - MINIMUM BACKFILL DEPTH REQUIREMENT IS FOR TRENCHING IN EXISTING PAVED STREETS. TRENCHING FOR NEW DEVELOPMENT WHERE STREETS HAVE NOT YET BEEN CONSTRUCTED, BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

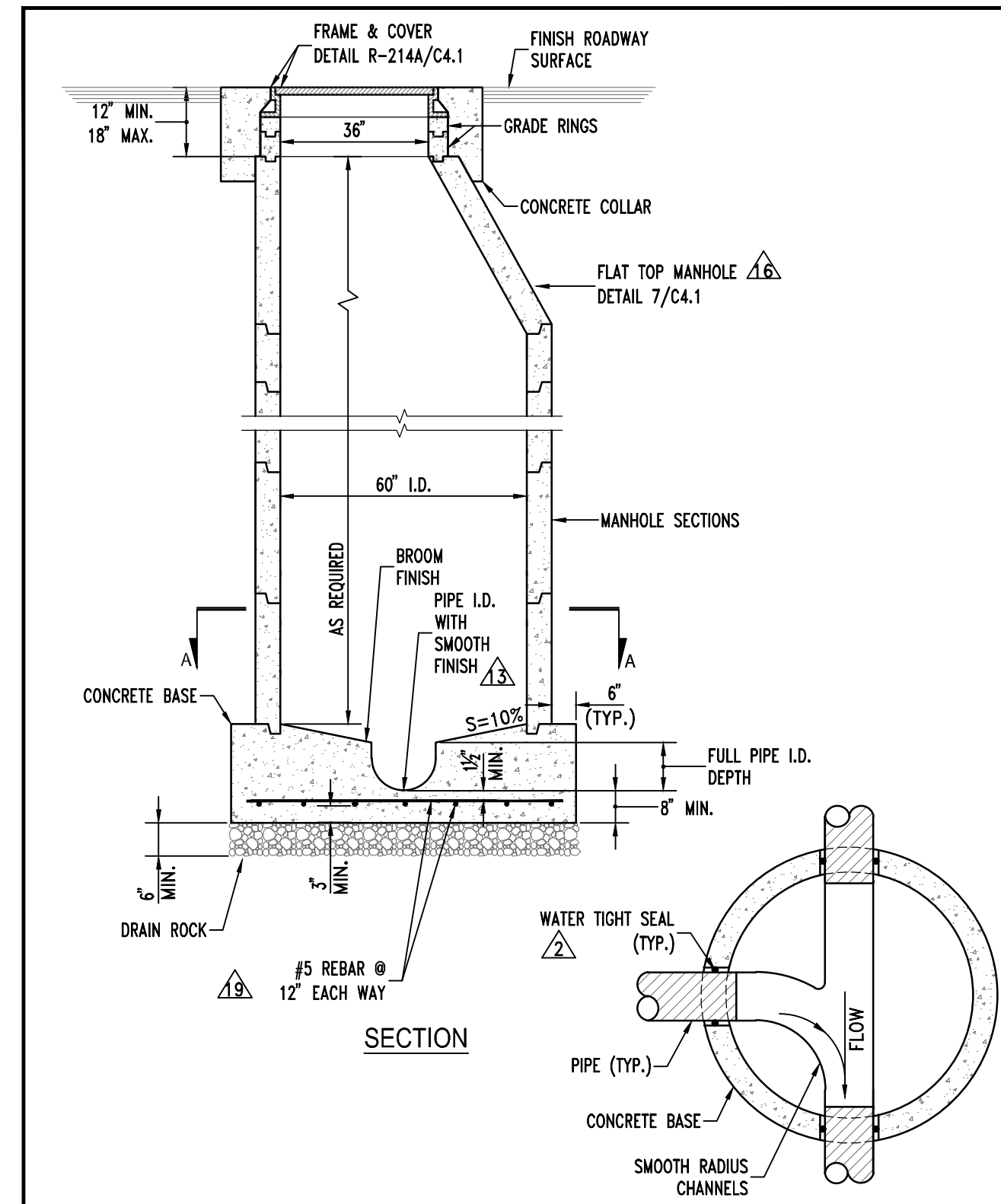
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>TRENCH EXCAVATION/BACKFILL</b>	R-122



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>24" x 36" CATCH BASIN</b>	R-208B



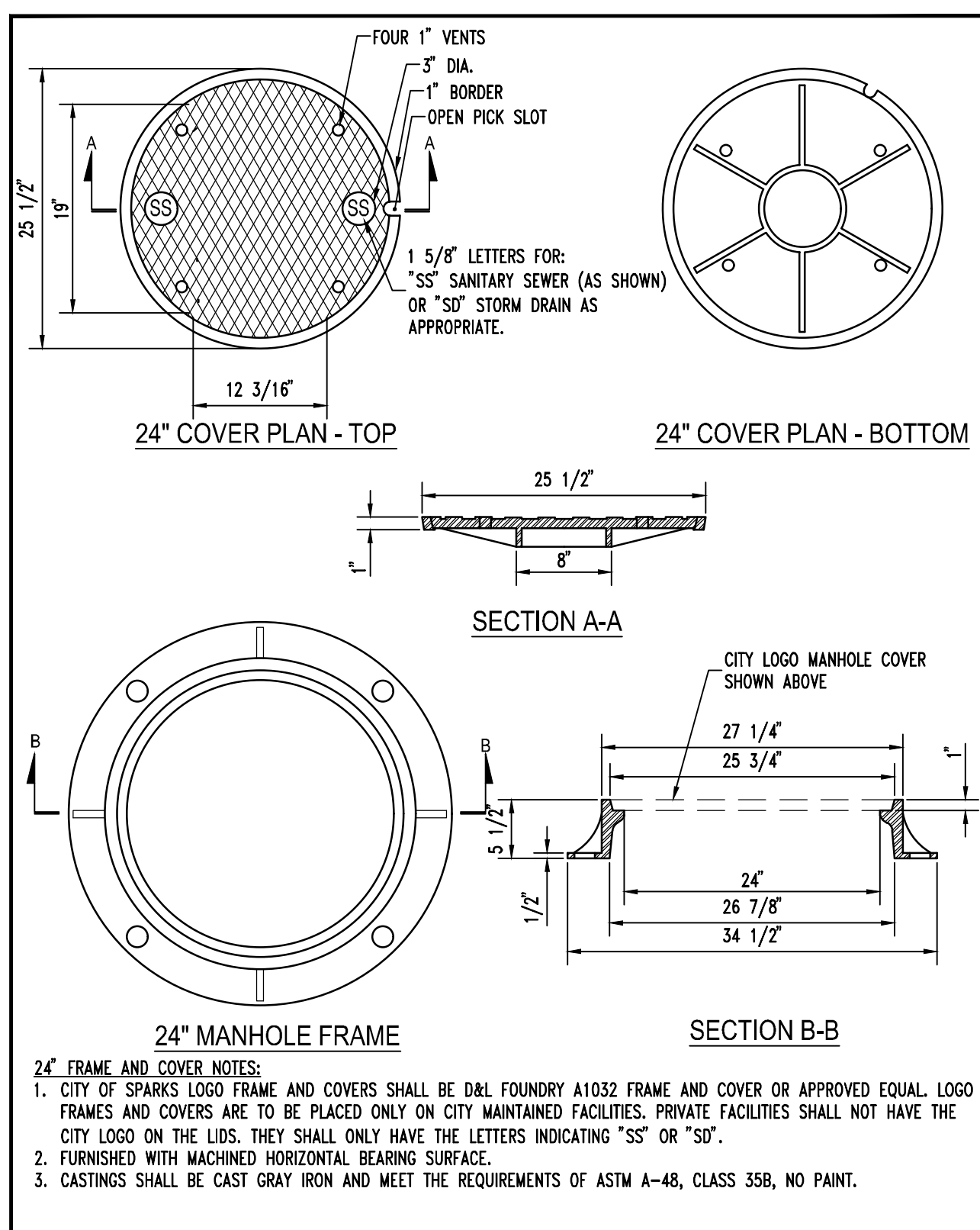
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>3 CATCH BASIN DEPRESSED COLLAR</b>	R-208B



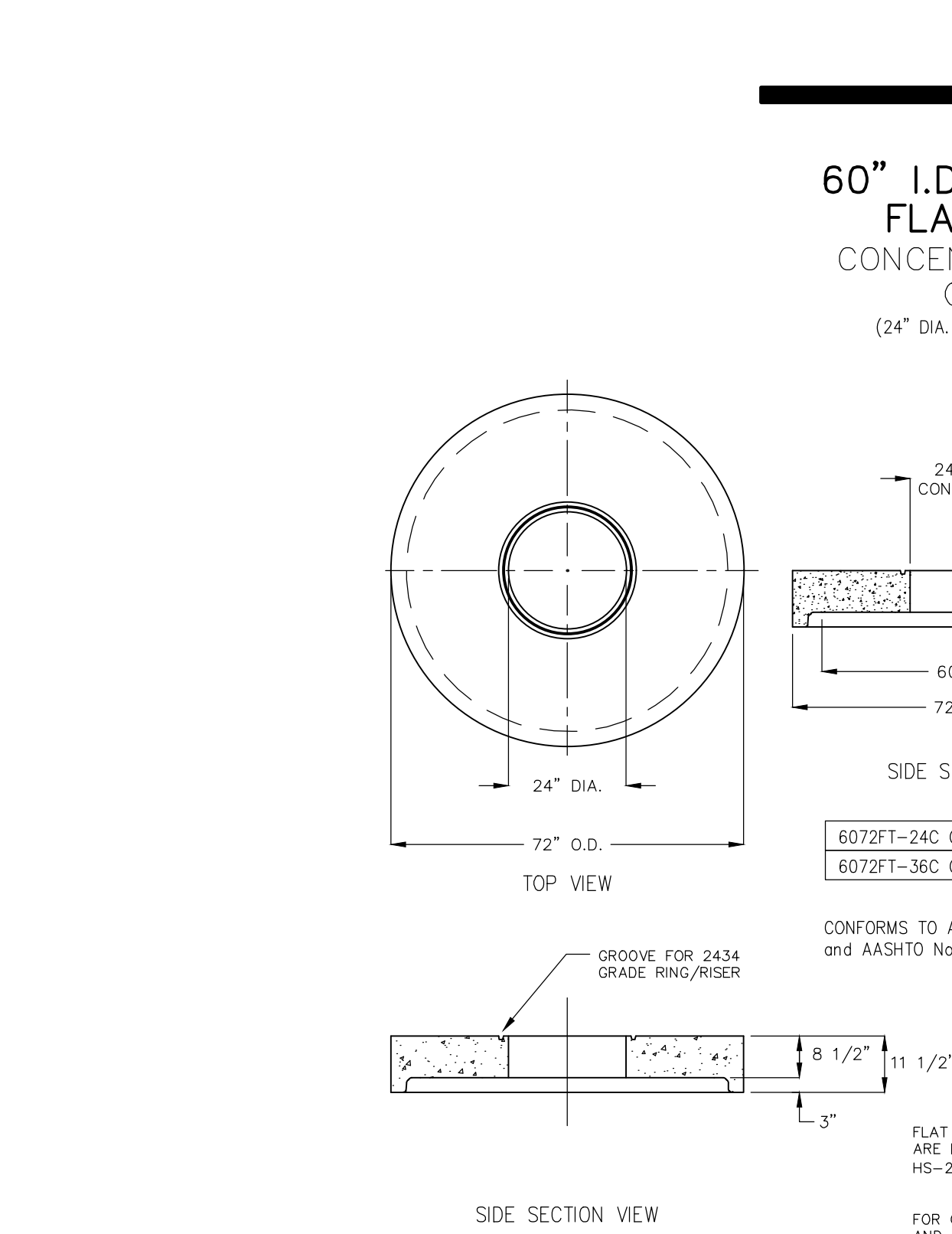
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>MANHOLE TYPE V</b>	R-208B

- GENERAL MANHOLE NOTES
- ALL PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.
  - PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION AS MEASURED AT THE OUTSIDE EDGES OF THE PIPE. VERTICALLY ALIGNED WITH THE SPRINGLINE. PIPE CONNECTION TO MANHOLE SHALL BE WATERTIGHT PER STANDARD DETAILS R-223A, R-223B AND R-223C.
  - MANHOLE BASE SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPW). PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
  - TYPE I MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 12" OR SMALLER AND DEPTHS NOT EXCEEDING 18 FEET.
  - TYPE V MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 15" THROUGH 27" OR DEPTHS EXCEEDING 18 FEET.
  - MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
  - PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
  - EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305 OF THE STANDARD SPECIFICATIONS.
  - EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE) IN EXISTING STREET SECTIONS, ALLEY SECTIONS, AND CONFINED AREAS, SUCH AS LIMITED EASEMENTS OR ADJACENT STRUCTURES.
  - MANHOLE PRECAST SECTION LENGTH SHALL BE ARRANGED TO FIT THE REQUIRED DEPTH.
  - NO LATERALS OR PIPES LESS THAN 8" IN DIAMETER SHALL BE CONNECTED TO THE MANHOLE.
  - PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
  - MATCH PIPE INVERTS TO MANHOLE INVERTS WHERE PIPES CONNECT TO MANHOLE BASE.
  - ALL MANHOLES SHALL BE WATERTIGHT.
  - SEE DETAIL FOR OUTSIDE DROP MANHOLE FOR SANITARY SEWERS WITH MORE THAN 2 FEET VERTICAL DROP AT THE MANHOLE. THE USE OF "INSIDE DROP" MANHOLES IS NOT PERMITTED.
  - THE USE OF FLAT TOP MANHOLE CONES REQUIRES PRIOR APPROVAL FROM THE CITY ENGINEER.
  - PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER ASTM C-1244.
  - NO STEPS, LADDERS, OR OTHER CLIMBING DEVICES SHALL BE INSTALLED IN THE MANHOLE.
  - REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST 1/2" CLEAR, UNLESS OTHERWISE NOTED.
  - WHEN PIPE CONNECTIONS TO EXISTING MANHOLES ARE ALLOWED, THEY SHALL BE MADE BY CORE DRILLING THE MANHOLE AND CONNECTING THE PIPE PENETRATION PER DETAIL R-223A & R-223B.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>NOTES - MANHOLE TYPE I &amp; TYPE V</b>	R-208C



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>24" MANHOLE FRAME &amp; COVER</b>	R-214A



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>60" MANHOLE FLAT TOP</b>	R-214A

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DATE

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PROFESSIONAL SEAL:

*Charrison*

EXPIRES 06-30-19

07-26-2017

ENGINEERS - LAND SURVEYORS  
PLANNERS - LANDSCAPE ARCHITECTS  
150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502  
775-856-1150 MAIN ■ 775-856-1160 FAX ■ CHARENDO.COM

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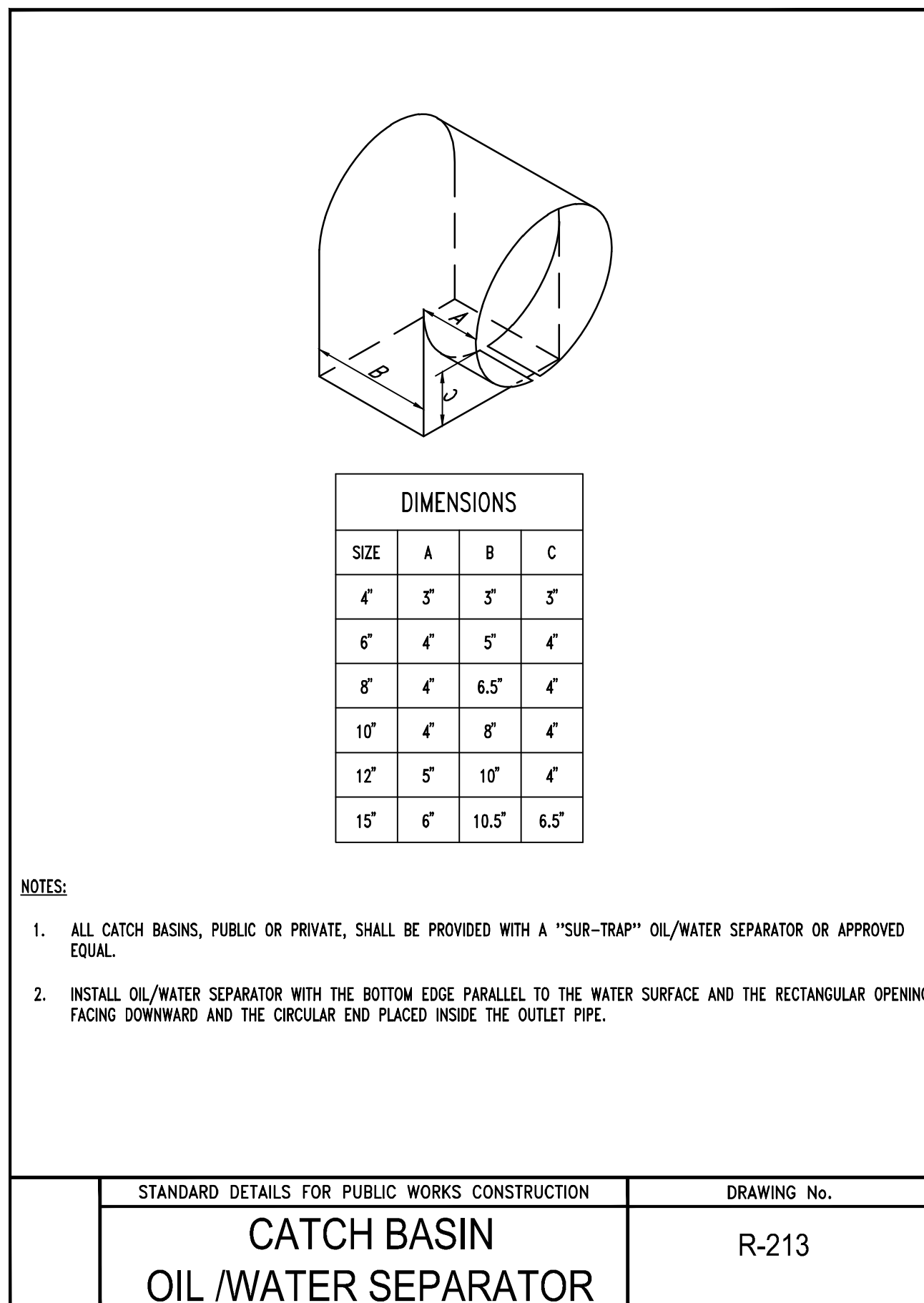
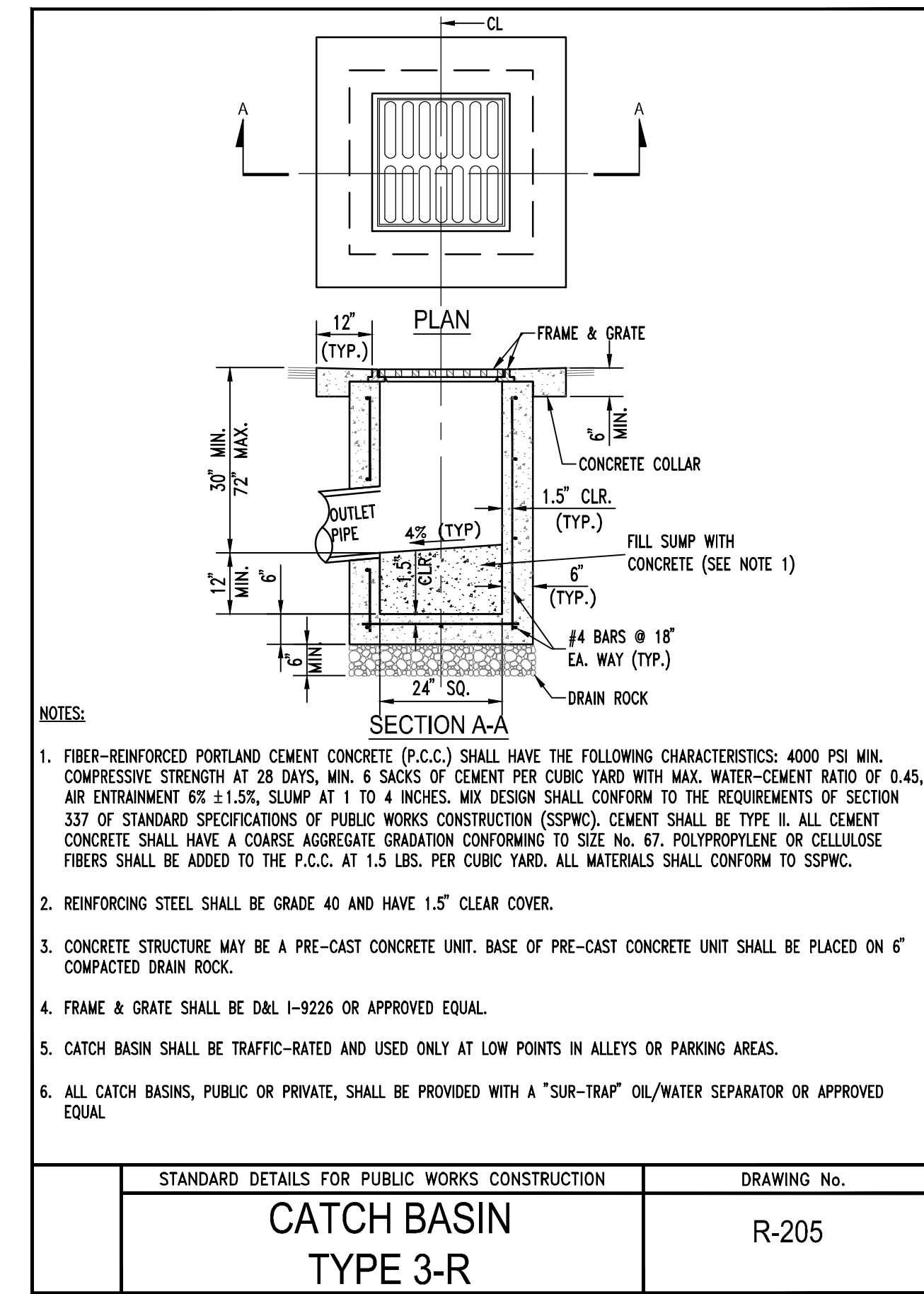
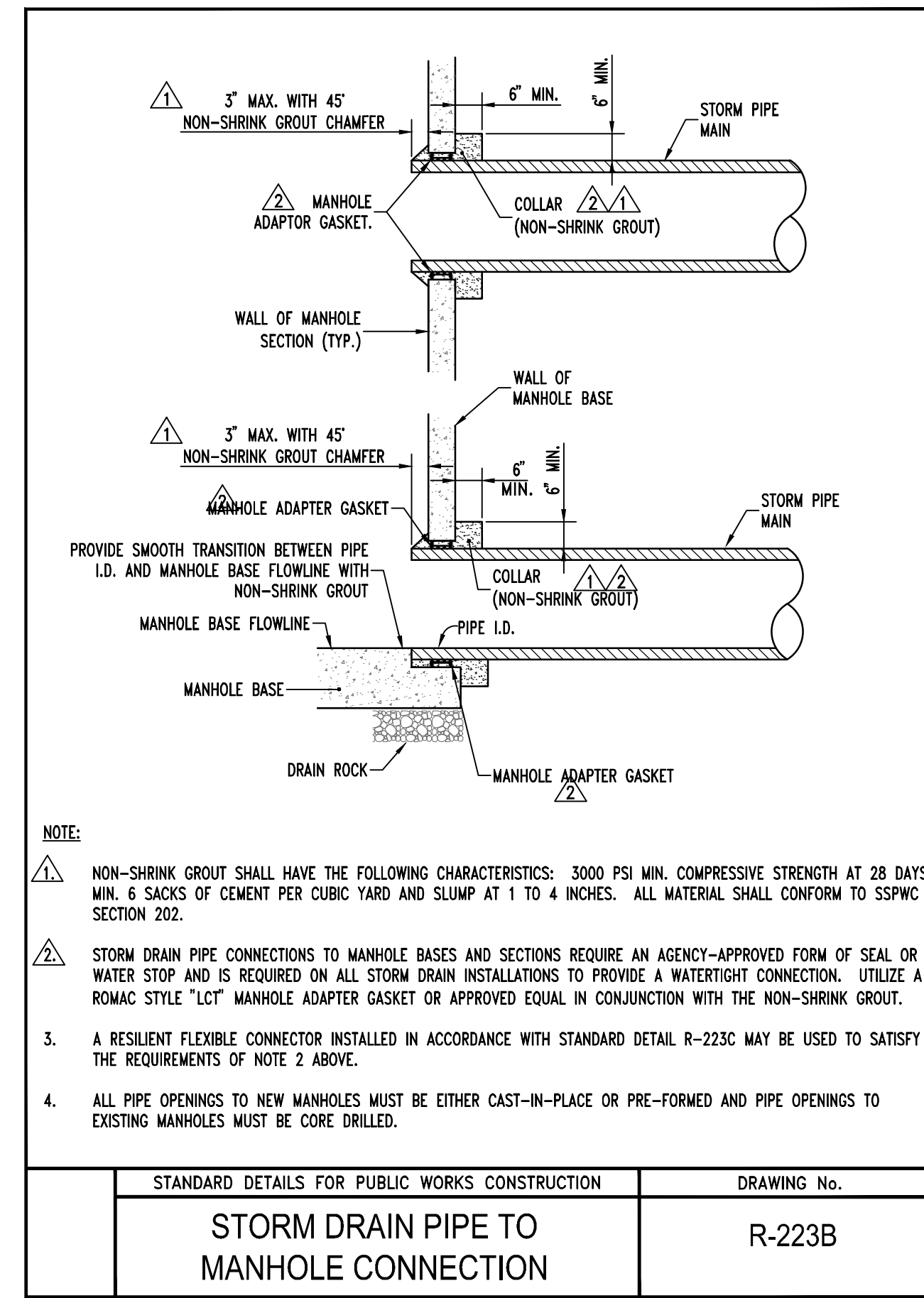
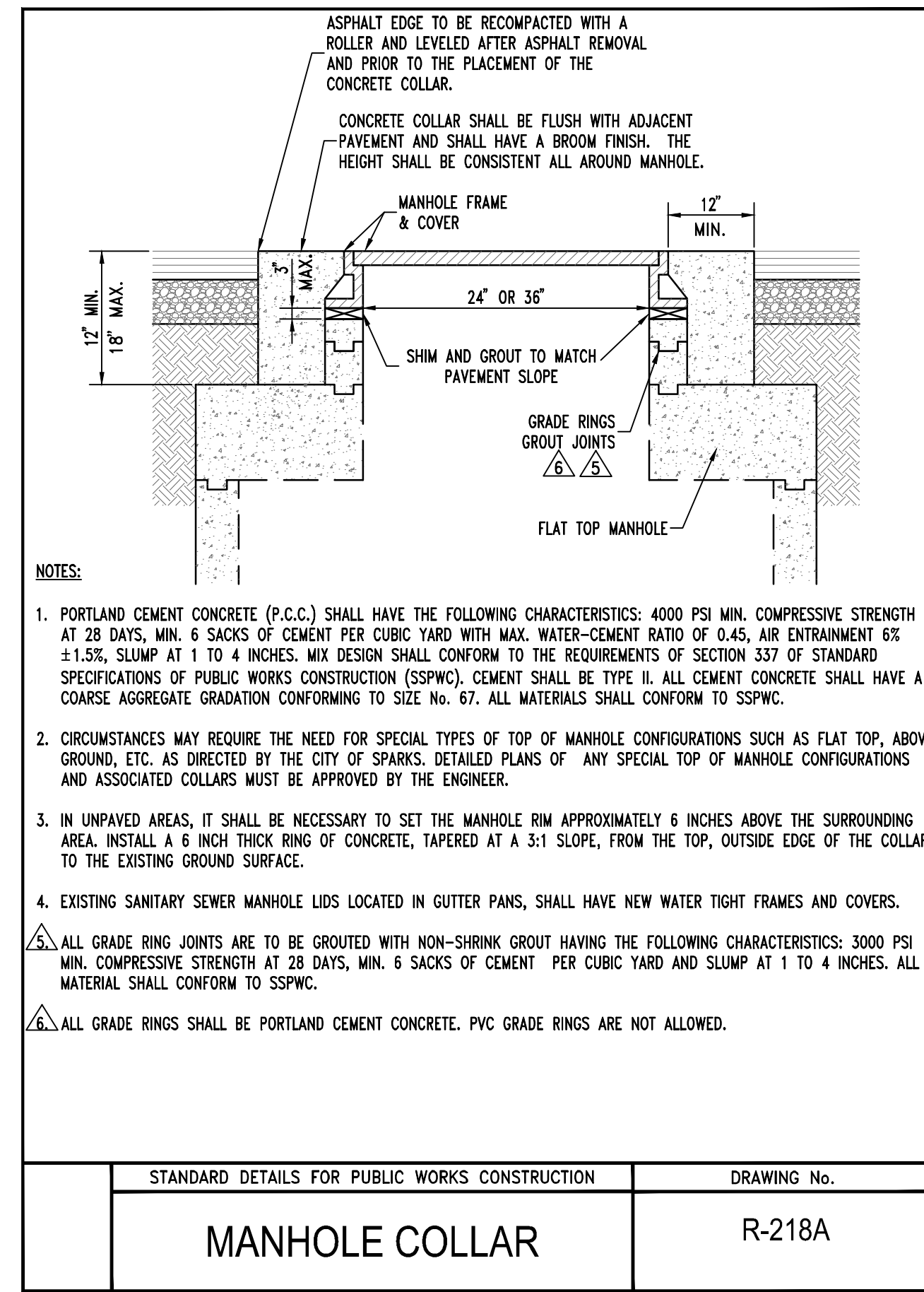
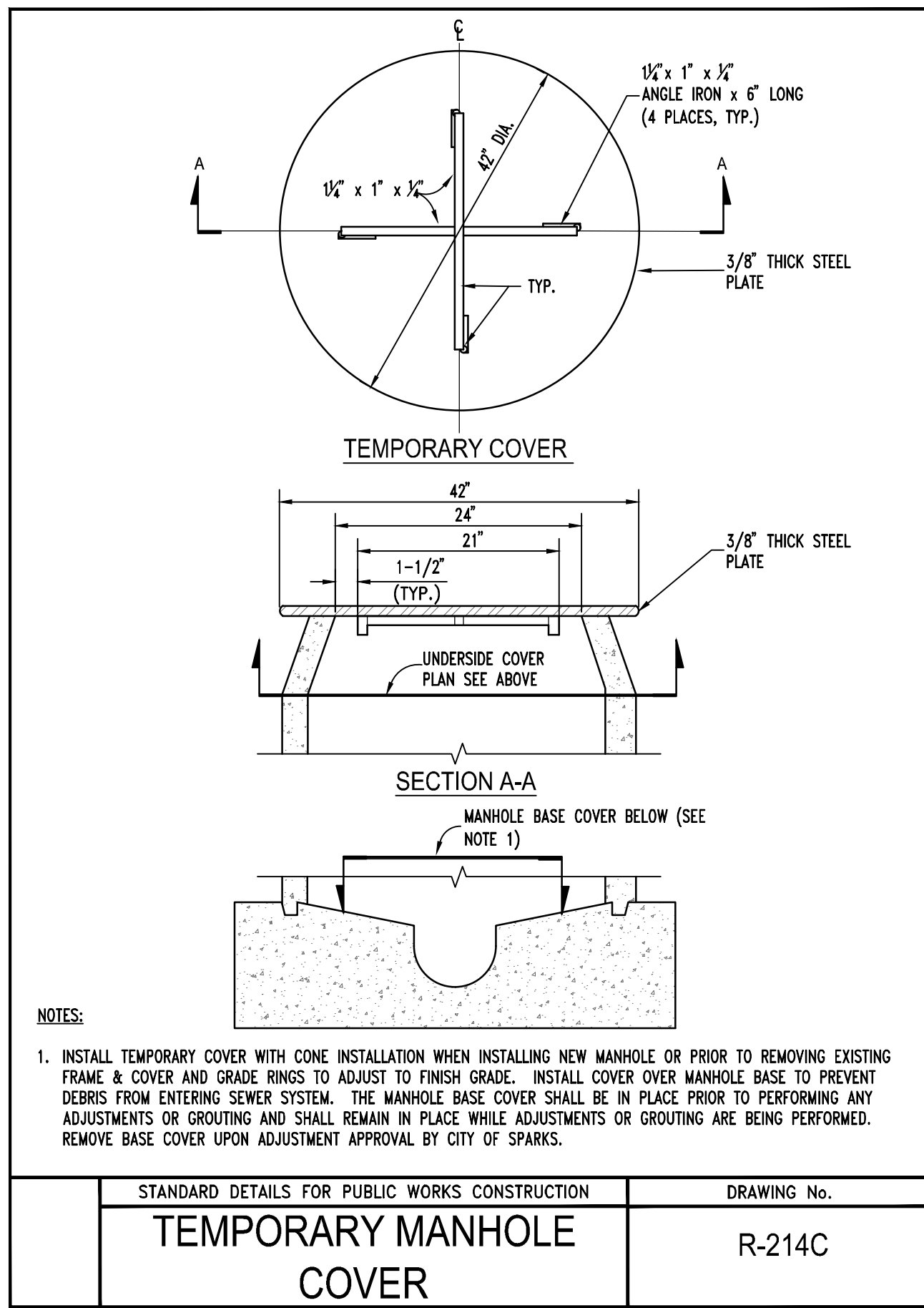
NEVADA

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JOB NO. 16036.00  
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- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE LOCATIONS AND/OR ELEVATIONS AT THE PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, HE SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE OR RELOCATE ALL EXISTING UTILITIES AND FEATURES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. CONTRACTOR SHALL OBTAIN APPROVALS FROM THE GOVERNING AGENCIES, THE ENGINEER, AND THE UTILITY COMPANIES PRIOR TO SUCH REMOVAL AND/OR RELOCATION.
- THE CONTRACTOR ASSUMES ALL RISK FOR ANY CONSTRUCTION PERFORMED WITH PRELIMINARY OR NONAPPROVED PLANS.
- CONTRACTOR TO PROVIDE TRAFFIC CONTROL IN CONFORMANCE WITH THE LATEST EDITION OF MUTCD WHENEVER CONSTRUCTION IS IN PROGRESS WITHIN THE PUBLIC TRAVEL WAY.

REVISIONS	DATE	MARK	BY

PROFESSIONAL SEAL:

**ENGINEERS - LAND SURVEYORS**  
**PLANNERS - LANDSCAPE ARCHITECTS**  
 1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502  
 775-866-1150 MAIN ■ 775-866-1160 FAX ■ CHARENO.COM

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**DETAILS**

CALL BEFORE YOU DIG  
 USA  
 UNDERGROUND SERVICE  
 800-227-2600

CAUTION - NOTICE TO CONTRACTOR

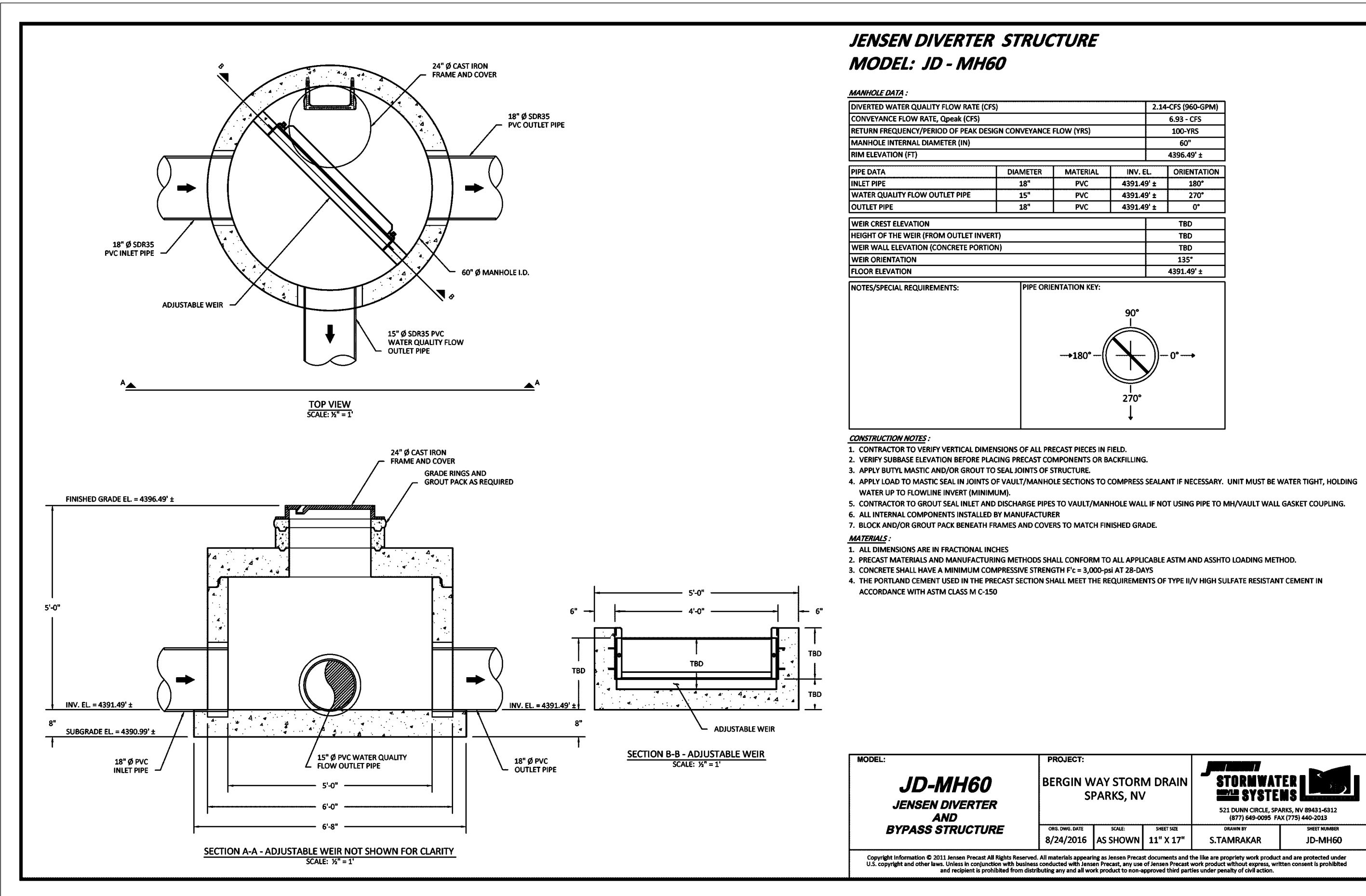
JOB NO. 16036.00  
 BY AE  
 DATE 07-26-2017  
 SHEET

**C4.2**

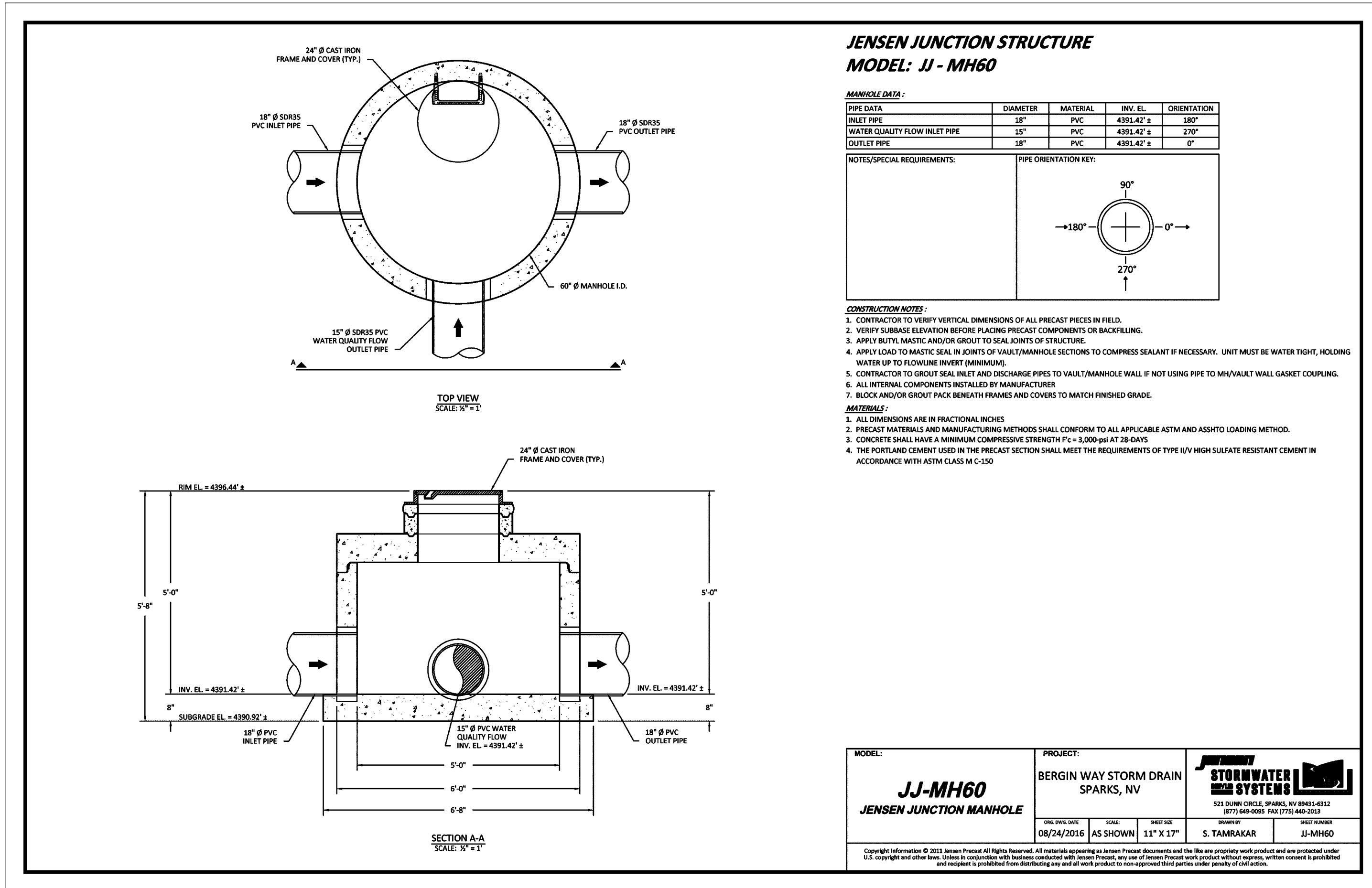
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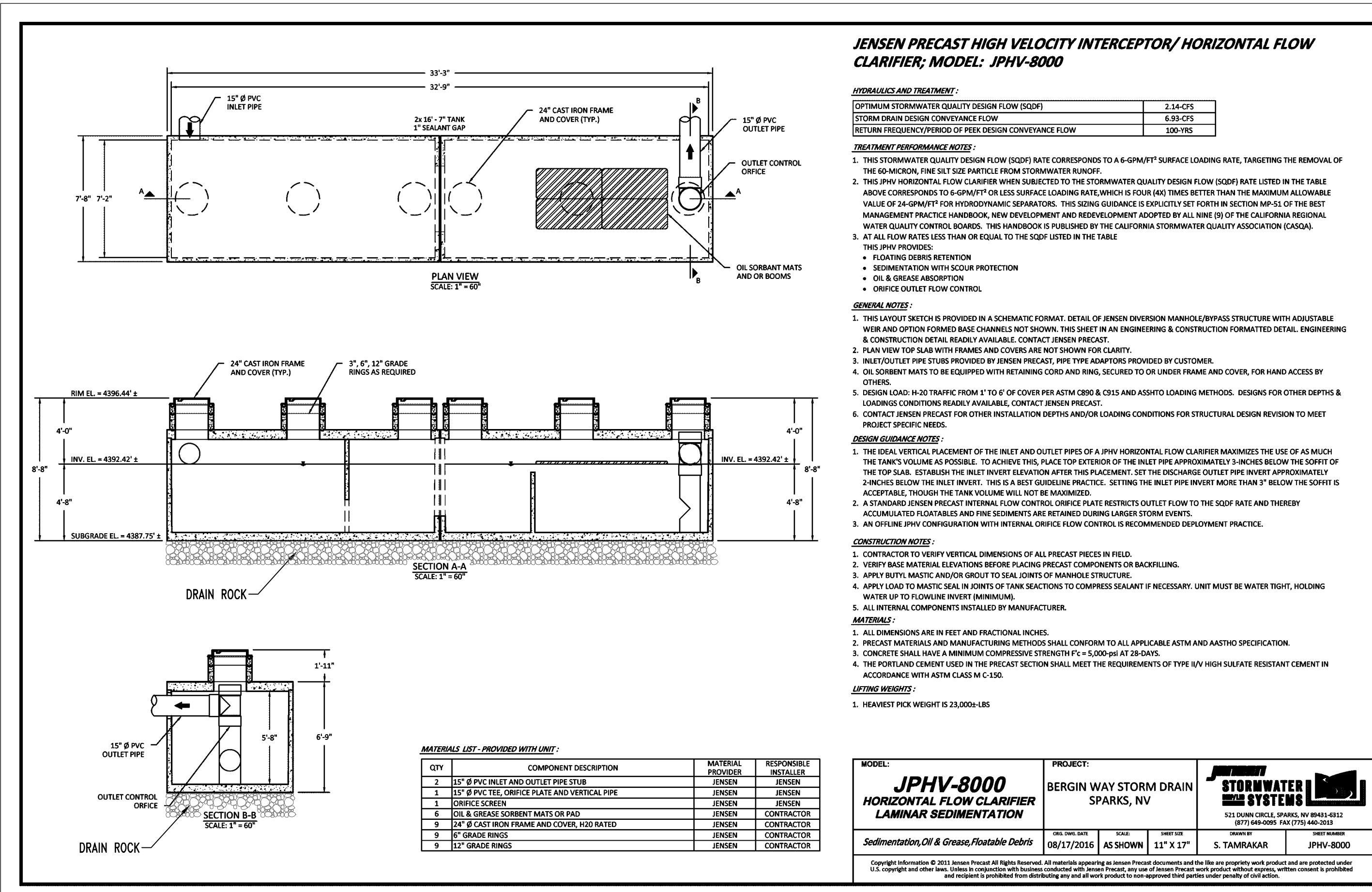




1 JD-MH60 BYPASS MANHOLE (OR APPROVED EQUAL)  
C4.4 N.T.S.



2 JJ-MH60 JUNCTION MANHOLE (OR APPROVED EQUAL)  
C4.4 N.T.S.



3 JPHV-8000 STORMWATER INTERCEPTOR (OR APPROVED EQUAL)  
C4.4 N.T.S.

BID SET

REVISIONS

DATE

MARK

PROFESSIONAL SEAL:

**CHARRISON ENGINEERS & ARCHITECTS**  
Exp. 06-30-19  
CIVIL  
No. 19174  
07-26-2017

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