



# CITY OF SPARKS 2018 CDBG STREET IMPROVEMENTS FEDERALLY FUNDED

## H ST. FROM ROCK BLVD TO 15TH ST., AND 16TH ST. BETWEEN G ST. AND I ST., WASHOE COUNTY, NEVADA



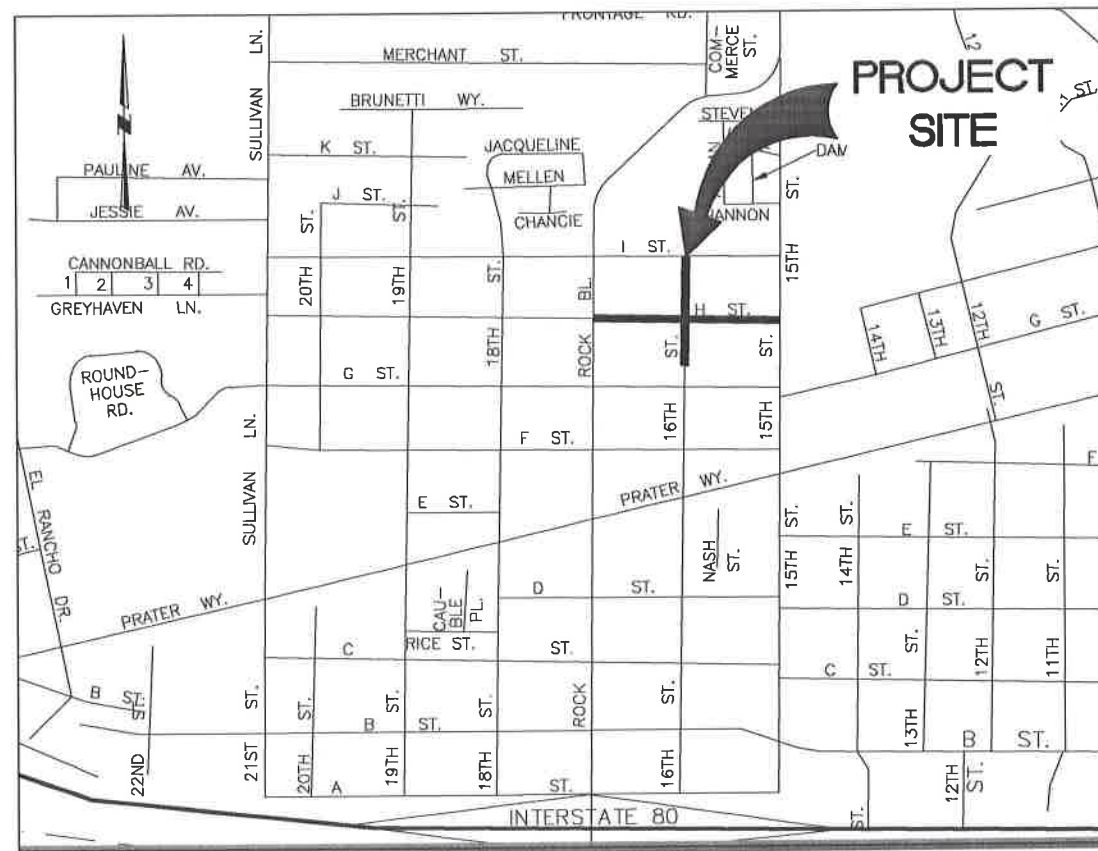
**COS PROJECT NUMBER: 17/18-016**  
**PWP NO: WA-2018-129**

**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* 3/7/18  
DATE  
JON R. ERICSON, P.E., P.T.O.E.  
CITY ENGINEER

**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, CITY OF SPARKS BENCHMARK #59 AS USED IN THIS SURVEY WITH AN ELEVATION OF 4422.01 FEET.

**PREPARED AND SUBMITTED BY:**

CATHERINE J. HARRISON, P.E. DATE



# GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DETAILS CONTAINED IN THESE PLANS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), 2012 EDITION, 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 332, 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 CITY OF SPARKS 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 FEET" 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 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 RECORD 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 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. THE 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 SPECIAL TECHNICAL SPECIFICATIONS AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC, 2012), SECTION 301.00.
- NOT ALL EXISTING IMPROVEMENTS, ADJACENT PROPERTY, INCLUDING BUT NOT LIMITED TO, FENCING, WALLS, UTILITIES AND OTHER FACILITIES, MAILBOXES, WATER METERS, POWER POLES, OVERHEAD LINES, STREET SIGNS, CATCH BASINS, TREES AND PLANTS, ETC., ARE SHOWN ON THE PLANS. ALL EXISTING ITEMS 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.
- ALL SETTLING, DRAINAGE ISSUES, AND UNSUITABLE MATERIALS SHALL BE REMOVED, CORRECTED, AND REPLACED WITH RECYCLED AGGREGATE BASE OR IMPORTED TYPE 2, CLASS B AGGREGATE BASE.

# LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CURB & GUTTER
		1' CONTOUR
		5' CONTOUR
		SPOT ELEVATION
		SANITARY SEWER (AND SIZE, IF AVAILABLE)
		STORM DRAIN (AND SIZE, IF AVAILABLE)
		ELECTRIC
		GAS (AND SIZE, IF AVAILABLE)
		WATER AND GAS
		WATER (AND SIZE, IF AVAILABLE)
		TELEPHONE
		OVERHEAD LINES
		CABLE TV
		COMMUNICATION
		FIBER OPTIC
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
		TELEPHONE MANHOLE
		ELECTRIC MANHOLE
		UTILITY MANHOLE
		WATER VALVE
		GAS VALVE
		SEWER OR STORM DRAIN CLEANOUT
		WATER METER
		BACKFLOW PREVENTER

EXISTING	PROPOSED	DESCRIPTION
		TRANSFORMER PAD
		ELECTRIC VAULT
		TELEPHONE VAULT
		POWER POLE
		SURVEY MONUMENT
		FIRE DEPARTMENT CONNECTION
		FIRE HYDRANT
		STREET SIGN
		STREET LIGHTING AND/OR LIGHT POLE
		TREE / TREE TO BE REMOVED
		CHAINLINK FENCE
		BARBED WIRE FENCE
		WOOD FENCE
		HANDICAP (ADA) RAMP DOMES
		TRAFFIC SIGNAL
		TYPE 1 STORM DRAIN CATCH BASIN
		TYPE 3R STORM DRAIN CATCH BASIN
		TYPE 4R STORM DRAIN CATCH BASIN
		GRADE BREAK
		FLOW LINE
		SWALE
		SAWCUT
		PROPERTY LINE

# ABBREVIATIONS

AB	ANCHOR BOLT	E	EASTING	MDD	MAXIMUM DRY DENSITY	SSE	SANITARY SEWER EASEMENT
ABAN	ABANDONED	EX or EXIST	EXISTING	MECH	MECHANICAL	STA	STATION
ABC	AGGREGATE BASE COURSE	EA	EACH	MFR	MANUFACTURER	SIM	SIMILAR
AC	ASPHALT CONCRETE	ECR	END CURVE	MH	MANHOLE	SPEC	SPECIFICATIONS
ADD	ADDITIONAL	ECC	END CURVE RETURN	MIN	MINIMUM	SQ	SQUARE
ADJ	ADJACENT	ECC	ECCENTRIC	MISC	MISCELLANEOUS	SS	SANITARY SEWER STANDARD
APPROX	APPROXIMATE	EL	ELEVATION	MPH	MILES PER HOUR	STD	STANDARD
APPR	APPROVED	ELEC	ELECTRIC	N	NORTHING	SYMM	SYMMETRICAL
ARV	AIR RELEASE VALVE	ENGR	ENGINEER	NDP	NO DIRECT PAYMENT	TAN	TANGENT
BC	BEGIN CURVE	EVC	END OF VERTICAL CURVE	NTS	NOT TO SCALE	TB	THRUST BLOCK
BCR	BEGIN CURB RETURN	EW	EACH WAY	OC	ON CENTER	TC	TOP OF CURB
BFC	BACK FACE OF CURB	EXP JT	EXPANSION JOINT	OG	ORIGINAL GROUND	TC-DEP	TOP OF CURB - DEPRESSED
BLDG	BUILDING	FES	FLARED END SECTION	OZ	OUNCE	TECH	TECHNICAL
BM	BENCH MARK	FFC	FRONT FACE OF CURB	PC	POINT OF CURVE	TEL	TELEPHONE
BT	BOTTOM	FG	FINISH GRADE	PCC	PORTLAND CEMENT CONCRETE	TEMP	TEMPERATURE
BSW	BACK OF SIDEWALK	FH	FIRE HYDRANT	PI	POINT OF INTERSECTION	TF	TOP FACE
BVC	BEGIN VERTICAL CURVE	FIG	FIGURE	R or PL	PROPERTY LINE	TW or TOW	TOP OF WALL
CB	CATCH BASIN	E or FL	FLOWLINE	RT	POINT OF REVERSE CURVE	TYP	TYPICAL
CFM	CUBIC FEET PER MINUTE	FPS	FEET PER SECOND	PREFAB	PREFABRICATED	VC	VERTICAL CURVE
CFS	CUBIC FEET PER SECOND	FT	FOOT or FEET	PROP	PROPERTY	VERT	VERTICAL
CF	CAST IRON	F	DEGREE FAHRENHEIT	PSF	POUNDS PER SQUARE FOOT	VG	VALLEY GUTTER
CJ	CONSTRUCTION JOINT	G	GAS	PSI	POUNDS PER SQUARE INCH	W	WATER
CL	CENTERLINE	GAL	GALLON	PT	POINT OF TANGENCY	WF	WELDED WIRE FABRIC
CLR	CLEAR	GALV	GALVANIZED	PUE	PUBLIC UTILITY EASEMENT	YD	YARD
CMP	CORRUGATED METAL PIPE	GB	GRADE BREAK	PVC	POLYVINYL CHLORIDE		
CMU	CONCRETE MASONRY UNIT	GPD	GALLONS PER DAY	PVI	POINT OF VERTICAL INTERSECTION		
CO	CLEARANCE	HORIZ	HORIZONTAL	PVMT	PAVEMENT		
CONC	CONCRETE	HP	HORSEPOWER	R	RADIUS		
CONN	CONNECTION	ID	INSIDE DIAMETER	RCB	REINFORCED CONCRETE BOX CULVERT		
CONT	CONTINUOUS	IE	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE		
COORD	COORDINATE	IN	INCH	RD	ROAD		
CTR	CENTER	INV	INVERT	REF	REFERENCE or REFER		
CU	CUBIC	IRR	IRRIGATION	REINF	REINFORCED		
CU FT	CUBIC FEET	IRR	IRRIGATION	REQD	REQUIRED		
CU IN	CUBIC INCH	KW	KILOWATT	RT	RIGHT		
CU YD	CUBIC YARD	L	LENGTH	RW or ROW	RIGHT-OF-WAY		
CULV	CULVERT	LAT	LATERAL	SCH	SCHEDULE		
DBL	DOUBLE	LB	POUNDS	SD	STORM DRAIN		
DEP	DEPRESSED	LB/CU FT	POUNDS PER CUBIC FOOT	SECT	SECTION		
DTL	DETAIL	LONG	LONGITUDINAL	SF	SQUARE FOOT		
DIA	DROP INLET	LT	LEFT	SI	SQUARE INCH		
DWG	DRAWING	MAX	MAXIMUM				

# DEMOLITION NOTES (CONT'D)

- LENGTHS SHOWN FOR RAMPS ON DRIVEWAYS AND PEDESTRIAN RAMPS ARE FOR BID PURPOSES ONLY. LENGTHS SHALL BE VERIFIED IN FIELD AND CONFORM TO THE DETAILS AND SPECIFICATIONS PROVIDED.
- LINE AND GRADE FOR IMPROVEMENTS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR IN COORDINATION WITH THE CITY OF SPARKS INSPECTOR.

# UTILITY NOTES

- UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THE PLANS. HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE 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 AND TMWA 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.
- THE CONTRACTOR IS 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 BMPs 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 I STREET, H STREET AND 16TH STREET ARE DI CL 350 PSI, AND D STREET IS C-900 PVC CL 235 PSI.
- TMWA WILL INSPECT, CLEAN, OPERATE AND DOCUMENT ALL TMWA-OWNED VALVES WITHIN THE CONSTRUCTION ZONE PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL REVIEW AND VERIFY THIS INFORMATION WITH CITY OF SPARKS. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF TMWA'S INSPECTOR PRIOR TO CONSTRUCTION. THE FINAL LIST WILL BE USED FOR VALVE ADJUSTMENT/CLEANING VERIFICATION AT THE END OF THE PROJECT.
- 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 (PCC) SHALL MEET THE REQUIREMENTS OF SPECIFICATION SECTION 202.00. PCC 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
- REFERENCE DETAIL 3, SHEET C3.1 FOR ASPHALTIC CONCRETE REQUIREMENTS.
- TEMPORARY PATCHES SHALL BE HOT-MIX ASPHALT WITH A MINIMUM OF 3-INCHES IN DEPTH UNLESS INDICATED OTHERWISE. TEMPORARY PATCHES SHALL BE PLACED IMMEDIATELY FOLLOWING BACKFILLING AND COMPACTION OF TRENCHES THROUGH EXISTING PAVEMENTS. COLD MIX PATCHES SHALL ONLY BE ALLOWED ON AN INTERIM BASIS IF HOT-MIX PAVEMENT IS NOT AVAILABLE LOCALLY. COLD MIX PATCHES SHALL BE REPLACED WITH HOT-MIX PAVEMENT WHEN AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TEMPORARY COLD MIX PATCHES UNTIL THE TIME THE TEMPORARY HOT MIX PATCHES ARE PLACED. COLD MIX PATCHES SHALL BE DURA PATCH AS REQUIRED BY THE CITY OF SPARKS. 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

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

**CAUTION - NOTICE TO CONTRACTOR**

- 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.
- 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.



CITY OF SPARKS  
2018 CDBG STREET IMPROVEMENTS PROJECT  
GENERAL NOTES

REVISIONS  
MARK  
DATE

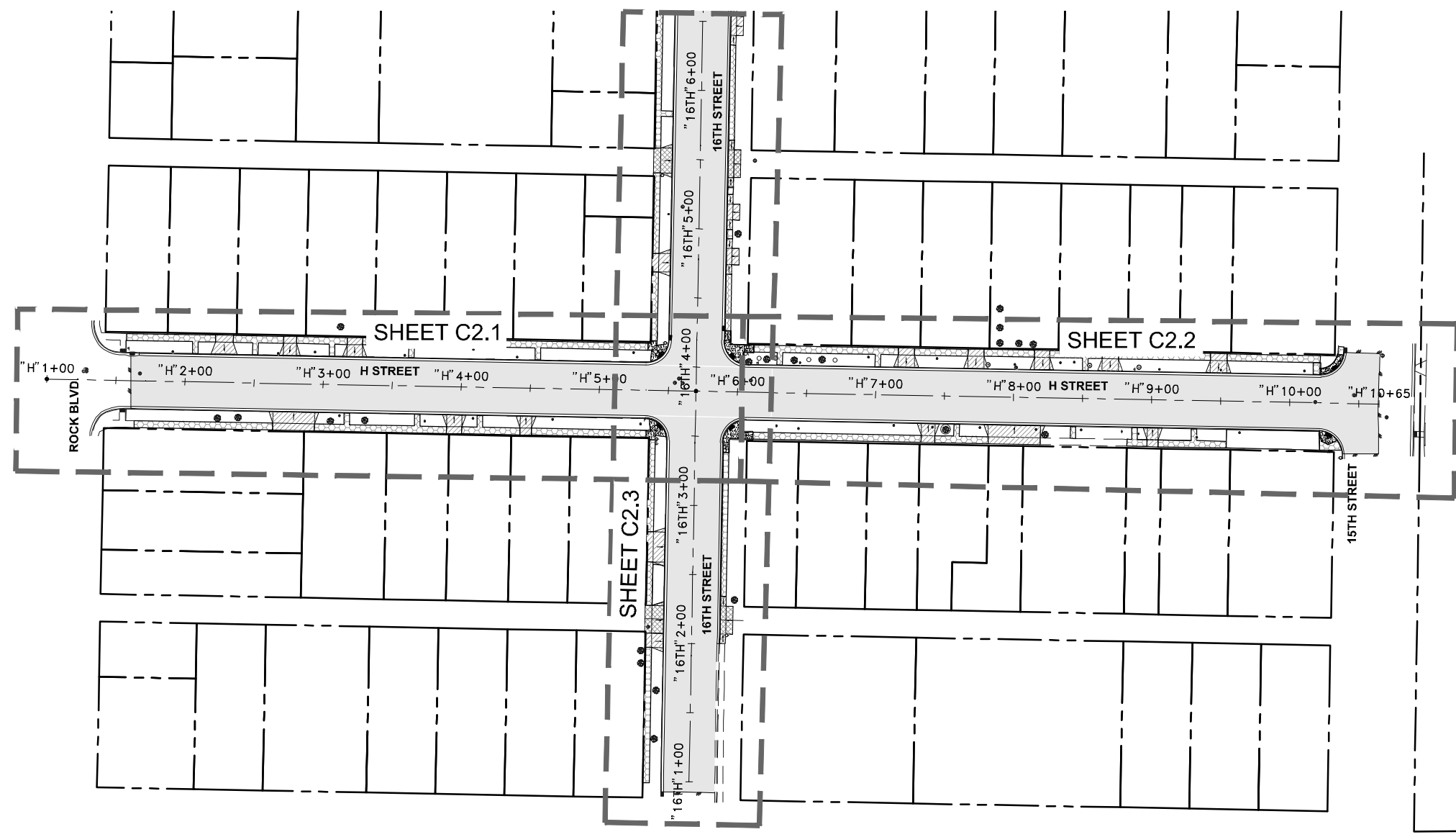
CFA, INC.  
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1850 CORPORATE BOULEVARD - RENO, NEVADA 89502  
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NEVADA  
SPARKS

JOB NO. 17-107.00  
DESIGNED BY BEH/CH  
CHECKED BY CH/MW  
DATE 03-07-2018

SHEET  
**C1.1**  
9

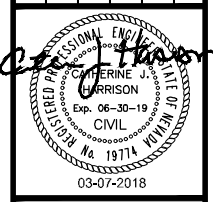
**BID SET**



**SHEET INDEX**

C1.0	TITLE SHEET
C1.1	GENERAL NOTES
C2.0	SHEET INDEX - H STREET AND 16TH STREET
C2.1	PLAN & PROFILE - H STREET, STA: 1+00 - 6+25
C2.2	PLAN & PROFILE - H STREET, STA: 6+25 - 10+65
C2.3	PLAN & PROFILE - 16TH STREET, STA: 1+00 - 6+61
C3.0	DETAILS
C3.1	DETAILS
C3.2	DETAILS

NO.	REVISIONS	DATE	BY



**CFA, INC.**  
 LAND SURVEYORS  
 CIVIL ENGINEERS  
 LAND USE PLANNERS  
 1550 CORPORATE BOULEVARD • RENO, NEVADA 89502  
 775-866-1150 MAIN • 775-866-1160 FAX • CFA@CFAINC.COM



**CAUTION - NOTICE TO CONTRACTOR**

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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.
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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.

**SHEET INDEX - H STREET & 16TH STREET**

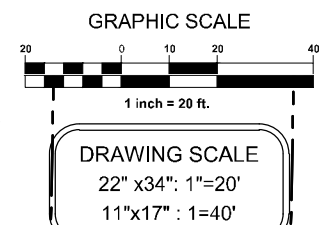
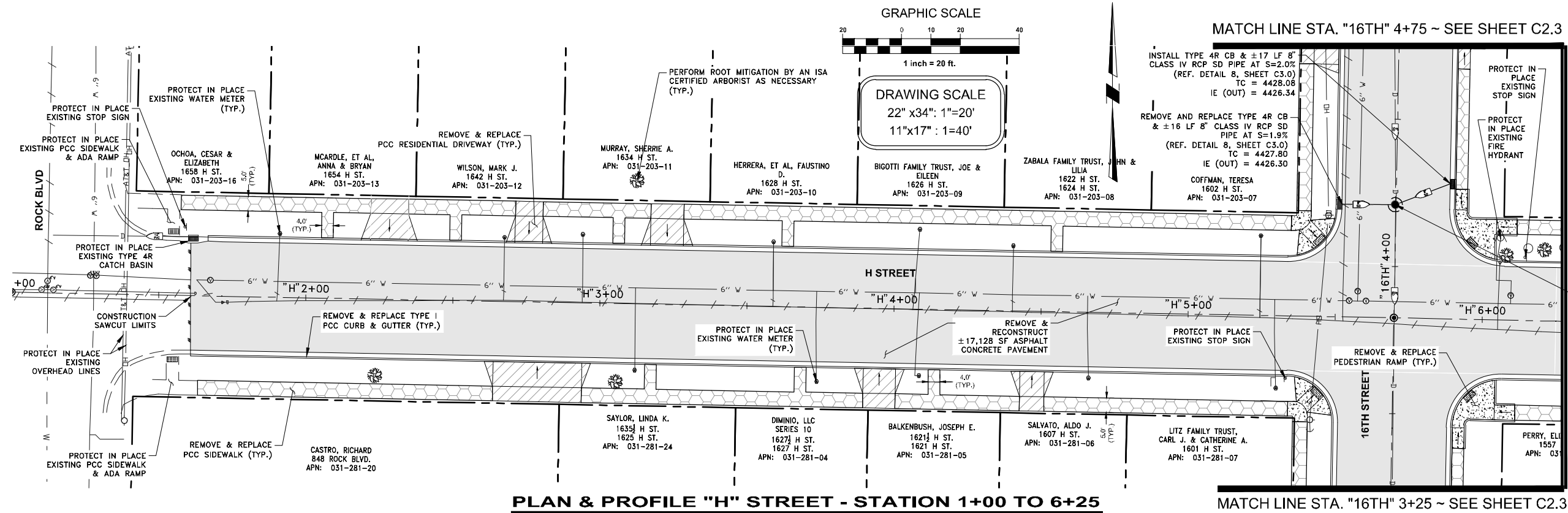
SCALE: 1" = 50'

**BID SET**

CITY OF SPARKS  
 2018 CDBG STREET IMPROVEMENTS PROJECT  
**SHEET INDEX**  
 H STREET & 16TH STREET

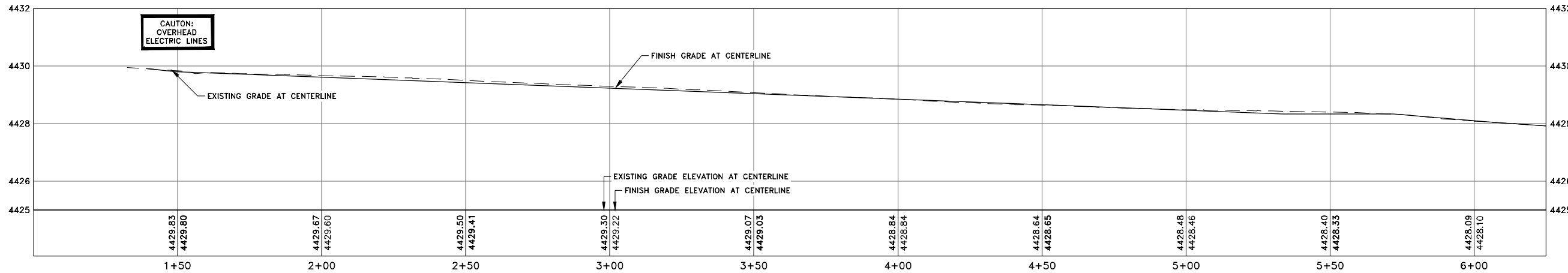
JOB NO.	17-107.00
DESIGNED BY	BEH/CH
CHECKED BY	CH/MW
DATE	03-07-2018

SHEET  
**C2.0**  
 OF  
**9**



**PLAN & PROFILE "H" STREET - STATION 1+00 TO 6+25**

H: 1" = 20'  
V: 1" = 2'



**DESIGN TABLE H STREET SHEET C2.1**

STATION	BACK OF SIDEWALK (LEFT)		LEFT LIP		OFFSET	CROWN		OFFSET	RIGHT LIP		BACK OF SIDEWALK (RIGHT)	
	EXISTING	PROPOSED	EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	EXISTING	PROPOSED
2+00	4,429.70	4,429.89	4,429.16	4,429.11	18.5	4,429.67	4,429.68	18.4	4,429.12	4,429.06	4,429.70	4,429.74
2+50	4,429.56	4,429.67	4,428.93	4,428.91	18.5	4,429.50	4,429.48	18.4	4,428.94	4,428.86	4,429.46	4,429.53
3+00	4,429.35	4,429.46	4,428.75	4,428.71	18.5	4,429.30	4,429.28	18.4	4,428.77	4,428.65	4,429.38	4,429.32
3+50	4,429.19	4,429.25	4,428.53	4,428.51	18.5	4,429.08	4,429.08	18.4	4,428.68	4,428.44	4,429.32	4,429.11
4+00	4,428.96	4,429.03	4,428.33	4,428.31	18.5	4,428.84	4,428.87	18.4	4,428.36	4,428.23	4,429.00	4,428.90
4+50	4,428.69	4,428.82	4,428.16	4,428.11	18.5	4,428.64	4,428.67	18.4	4,428.15	4,428.02	4,428.81	4,428.69
5+00	4,428.48	4,428.61	4,427.94	4,427.91	18.5	4,428.48	4,428.47	18.5	4,427.93	4,427.82	4,428.47	4,428.48

**NOTES:**  
NOT ALL EXISTING IMPROVEMENTS, ADJACENT PROPERTY, INCLUDING BUT NOT LIMITED TO, FENCING, WALLS, UTILITIES AND OTHER FACILITIES, MAILBOXES, WATER METERS, POWER POLES, OVERHEAD LINES, STREET SIGNS, CATCH BASINS, TREES AND PLANTS, ETC., ARE SHOWN ON THE PLANS. ALL EXISTING ITEMS THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED FROM INJURY OR DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 301.04 AND 300.04.

**ESTIMATED TOTALS SHEET C2.1**

ITEM	QUANTITY
REMOVE & REPLACE CURB AND GUTTER (C3.0)	749 LF
REMOVE & REPLACE SIDEWALK (C3.0)	3603 SF
REMOVE & REPLACE RESIDENTIAL DRIVEWAY (C3.1)	1272 SF
ASPHALT RECONSTRUCTION (C3.1)	17,128 SF
CONSTRUCT PEDESTRIAN RAMP (RAMP LENGTH VARIES TO COMPLY W/ ADA MAX. SLOPE.) (C3.0) OR (C3.0)	4 EACH
SAWCUT	36 LF
EXISTING TREE - PERFORM ROOT MITIGATION BY AN ISA CERTIFIED ARBORIST AS NECESSARY	5 EACH
REMOVE AND REPLACE EXISTING MANHOLE (C3.2) OR (C3.1)	1 EACH
REMOVE AND REPLACE/INSTALL TYPE 4R CATCH BASIN (C3.2)	2 EACH
ADJUST EXISTING WATER VALVES TO GRADE (C3.2)	5 EACH

**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.

**BID SET**

CITY OF SPARKS  
2018 CDBG STREET IMPROVEMENTS PROJECT  
**PLAN & PROFILE**  
STATION "H" 1+00 - 6+25

DESIGNED BY: BEH/CH  
CHECKED BY: CH/MW  
DATE: 03-07-2018

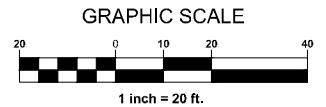
17-107-00  
SHEET  
**C2.1**  
9

SPARKS NEVADA

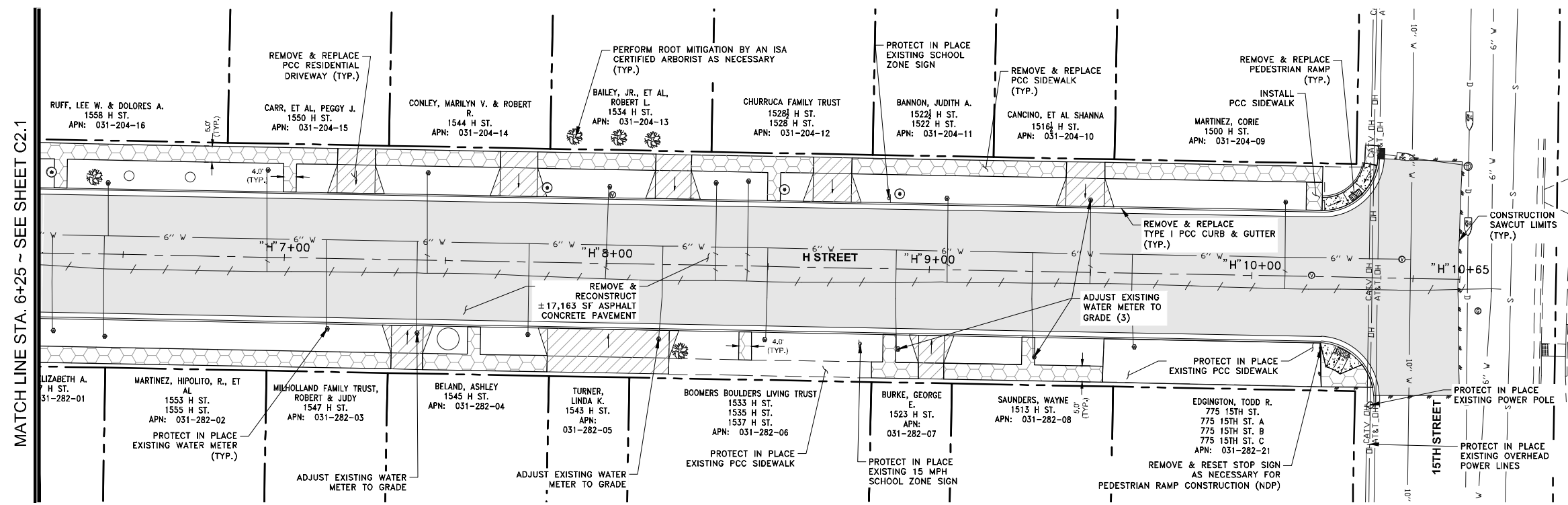
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LAND USE PLANNERS  
1550 CORPORATE BOULEVARD - RENO, NEVADA 89502  
775-866-1150 MAIN • 775-866-1150 FAX • CFA@CFAINC.COM

REGISTERED PROFESSIONAL ENGINEER  
SERRINE J. HARRISON  
Exp. 06-30-19  
CIVIL  
No. 19171  
APN: 0557  
03-07-2018

REVISIONS  
DATE  
MARK  
BY

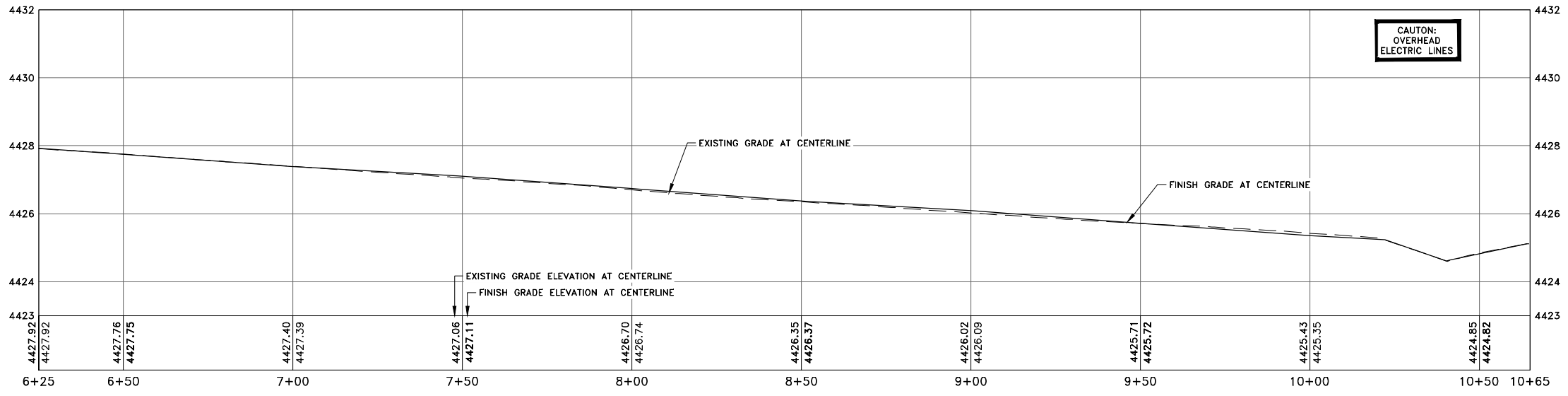


**DRAWING SCALE**  
 22" x 34" : 1" = 20'  
 11" x 17" : 1" = 40'



**PLAN & PROFILE "H" STREET - STA. 6+25 TO 10+65**

H: 1" = 20'  
 V: 1" = 4'



**NOTES:**

NOT ALL EXISTING IMPROVEMENTS, ADJACENT PROPERTY, INCLUDING BUT NOT LIMITED TO, FENCING, WALLS, UTILITIES AND OTHER FACILITIES, MAILBOXES, WATER METERS, POWER POLES, OVERHEAD LINES, STREET SIGNS, CATCH BASINS, TREES AND PLANTS, ETC., ARE SHOWN ON THE PLANS. ALL EXISTING ITEMS THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED FROM INJURY OR DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 301.04 AND 300.04.

**DESIGN TABLE H STREET SHEET C2.2**

STATION	BACK OF SIDEWALK (LEFT)		LEFT LIP		CROWN			RIGHT LIP		BACK OF SIDEWALK (RIGHT)		
	EXISTING	PROPOSED	EXISTING	PROPOSED	OFFSET	EXISTING	PROPOSED	OFFSET	EXISTING	PROPOSED	EXISTING	PROPOSED
SEE INTERSECTION PLAN H STREET AND 16TH STREET, SHEET C2.4												
6+50	4,427.71	4,427.87	4,427.30	4,427.39	18.5	4,427.76	4,427.76	18.1	4,427.14	4,427.05	4,427.64	4,427.58
7+00	4,427.39	4,427.52	4,426.79	4,427.02	18.5	4,427.40	4,427.39	18.1	4,426.81	4,426.74	4,427.29	4,427.26
7+50	4,427.46	4,427.17	4,426.47	4,426.65	18.5	4,427.06	4,427.11	18.2	4,426.47	4,426.42	4,427.26	4,426.94
8+00	4,427.19	4,426.82	4,425.99	4,426.28	18.5	4,426.70	4,426.74	18.2	4,426.15	4,426.10	4,426.84	4,426.62
8+50	4,426.55	4,426.46	4,425.79	4,425.91	18.5	4,426.35	4,426.37	18.3	4,425.83	4,425.79	4,426.32	----
9+00	4,426.18	4,426.11	4,425.42	4,425.54	18.5	4,426.03	4,426.10	18.3	4,425.39	4,425.47	4,425.89	4,425.99
9+50	4,425.68	4,425.76	4,425.12	4,425.17	18.5	4,425.72	4,425.72	18.3	4,425.10	4,425.16	4,425.63	4,425.67
10+00	4,425.40	4,425.41	4,424.80	4,424.80	18.5	4,425.42	4,425.35	18.5	4,424.78	4,424.84	4,425.32	----

**ESTIMATED TOTALS SHEET C2.2**

ITEM	QUANTITY
REMOVE & REPLACE CURB AND GUTTER (7 C3.0)	879 LF
REMOVE & REPLACE/INSTALL SIDEWALK (1 C3.0)	3262 SF
REMOVE & REPLACE RESIDENTIAL DRIVEWAY (5+6 C3.1)	1756 SF
ASPHALT RECONSTRUCTION (3+4 C3.1)	17,163 SF
CONSTRUCT PEDESTRIAN RAMP (RAMP LENGTH VARIES TO COMPLY W/ ADA MAX. SLOPE.) (2+3 C3.0) OR (5 C3.0)	2 EACH
SAWCUT	120 LF
EXISTING TREE - PERFORM ROOT MITIGATION BY AN ISA CERTIFIED ARBORIST AS NECESSARY	5 EACH
ADJUST EXISTING WATER VALVES TO GRADE (8 C3.2)	2 EACH

**CAUTION - NOTICE TO CONTRACTOR**

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**CITY OF SPARKS**  
 2018 CDBG STREET IMPROVEMENTS PROJECT  
**PLAN & PROFILE**  
 STATION "H" 6+25 - 10+65

**BID SET**

C2.2  
 9

NEVADA  
 SPARKS

17-107.00  
 BEH/CH  
 CH/MW  
 03-07-2018

DESIGNED BY  
 CHECKED BY  
 DATE

BY  
 MARK  
 DATE

REVISIONS

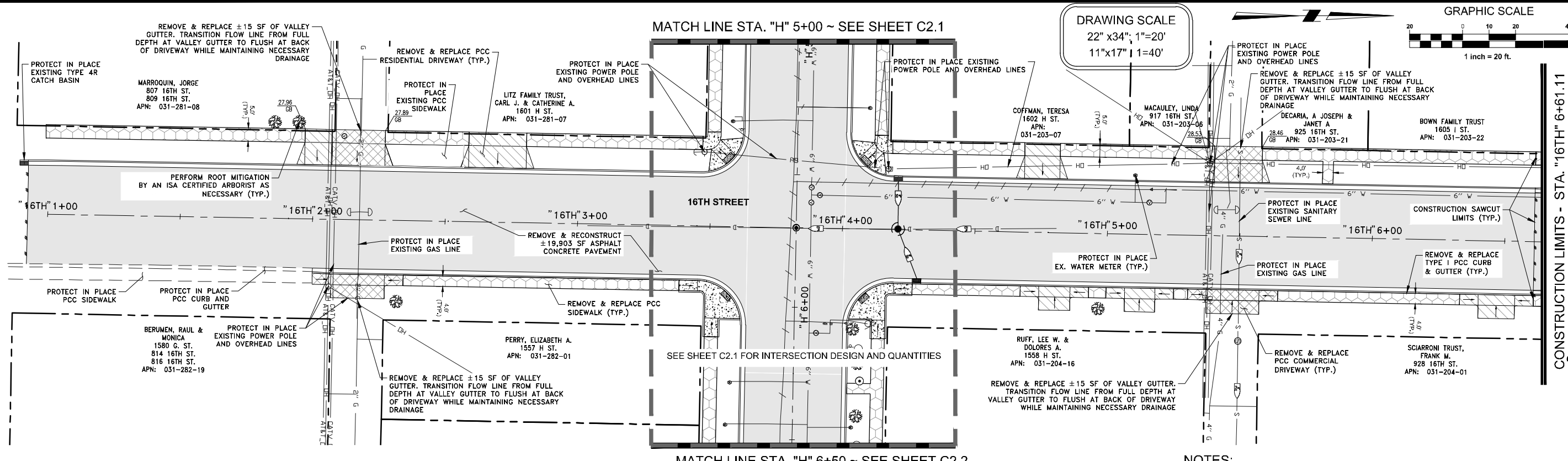
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 LAND USE PLANNERS  
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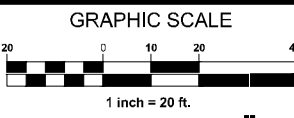
**REGISTERED PROFESSIONAL ENGINEER**  
 TERRINE J. HARRISON  
 Exp. 06-30-19  
 CIVIL  
 No. 19171  
 03-07-2018

**CALL BEFORE YOU DIG**  
 USA Not a Utility  
 800-227-2800

PROJECT: X:\Projects\17107.00\DWG\ENR\SHEETS\SITE PLAN.dwg BHERMES 3/7/2018 9:36 AM



**DRAWING SCALE**  
 22" x 34"; 1"=20'  
 11" x 17"; 1"=40'

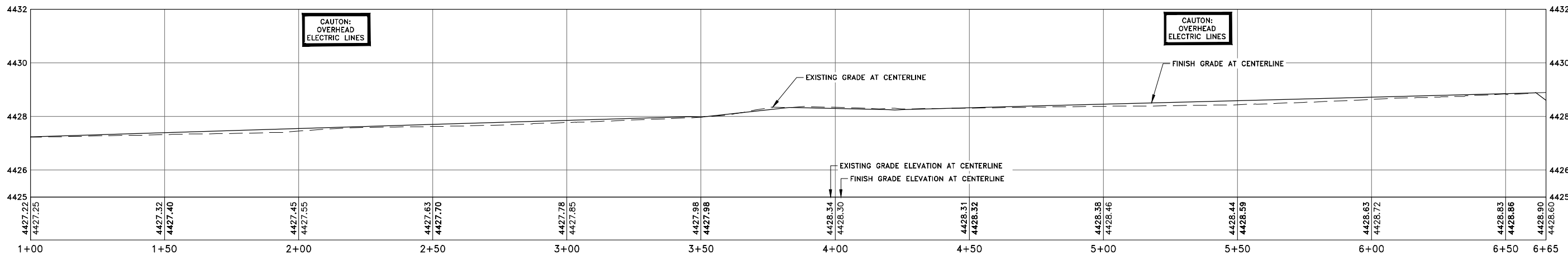


**PLAN & PROFILE "16TH" STREET - STA. 1+00 TO 6+65**

H: 1" = 20'  
 V: 1" = 2'

**NOTES:**

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**DESIGN TABLE 16TH STREET SHEET C2.3**

STATION	BACK OF SIDEWALK (LEFT)		LEFT LIP		OFFSET	CROWN		OFFSET	RIGHT LIP		BACK OF SIDEWALK (RIGHT)	
	EXISTING	PROPOSED	EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	EXISTING	PROPOSED
1+00	----	----	4,426.90	<b>4,426.79</b>	18.5	4,427.22	<b>4,427.25</b>	18.7	----	----	----	----
1+50	4,427.76	4,427.77	4,427.01	<b>4,426.94</b>	18.5	4,427.32	<b>4,427.40</b>	18.5	----	----	----	----
2+00	4,427.96	4,427.93	4,427.16	<b>4,427.09</b>	18.5	4,427.45	<b>4,427.55</b>	18.5	4,426.74	<b>4,426.74</b>	----	----
2+50	4,427.98	4,427.97	4,427.25	<b>4,427.24</b>	18.5	4,427.63	<b>4,427.70</b>	18.6	4,426.92	<b>4,426.86</b>	4,427.44	<b>4,427.32</b>
3+00	4,428.09	4,428.16	4,427.42	<b>4,427.39</b>	18.5	4,427.78	<b>4,427.86</b>	18.6	4,427.05	<b>4,426.99</b>	4,427.53	<b>4,427.46</b>
<b>16TH STREET AND H STREET INTERSECTION</b>												
4+50	4,428.22	4,428.46	4,427.66	<b>4,427.68</b>	18.5	4,428.32	<b>4,428.33</b>	18.1	4,427.71	<b>4,427.75</b>	4,428.13	<b>4,428.19</b>
5+00	4,428.36	4,428.49	4,427.78	<b>4,427.81</b>	18.5	4,428.38	<b>4,428.46</b>	18.1	4,427.92	<b>4,427.85</b>	4,428.31	<b>4,428.29</b>
5+50	4,428.18	4,428.18	4,427.99	<b>4,427.95</b>	18.5	4,428.44	<b>4,428.60</b>	18.2	4,427.94	<b>4,427.95</b>	DRIVEWAY	DRIVEWAY
6+00	4,428.53	4,428.62	4,428.10	<b>4,428.08</b>	18.5	4,428.63	<b>4,428.73</b>	18.2	4,428.07	<b>4,428.05</b>	4,428.39	<b>4,428.48</b>
6+50	4,428.84	4,428.81	4,428.19	<b>4,428.22</b>	18.5	4,428.84	<b>4,428.86</b>	18.2	4,428.24	<b>4,428.15</b>	DRIVEWAY	DRIVEWAY

**ESTIMATED TOTALS SHEET C2.3**

ITEM	QUANTITY
REMOVE & REPLACE CURB AND GUTTER (7 C3.0)	987 LF
REMOVE & REPLACE/INSTALL SIDEWALK (1 C3.0)	2973 SF
REMOVE & REPLACE RESIDENTIAL DRIVEWAY (5+6 C3.1)	1171 SF
COMMERCIAL DRIVEWAY (5+6 C3.1)	1024 SF
ASPHALT RECONSTRUCTION (3+4 C3.1)	19,903 SF
VALLEY GUTTER (8 C3.1)	60 SF
SAWCUT	82 LF
EXISTING TREE - PERFORM ROOT MITIGATION BY AN ISA CERTIFIED ARBORIST AS NECESSARY	4 EACH
ADJUST EXISTING WATER VALVES TO GRADE (8 C3.2)	2 EACH

**CAUTION - NOTICE TO CONTRACTOR**

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**CITY OF SPARKS**  
 2018 CDBG STREET IMPROVEMENTS PROJECT  
**PLAN & PROFILE**  
 STATION "16TH" 1+00 - 6+65

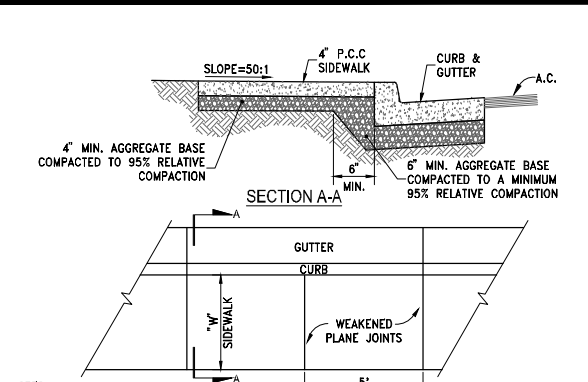
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 SPARKS

JOB NO. 17-107.00  
 DESIGNED BY BEH/CH  
 CHECKED BY CH/MW  
 DATE 03-07-2018

**BID SET**  
**C2.3**  
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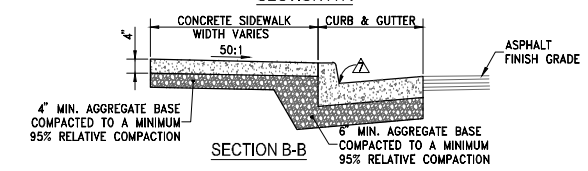
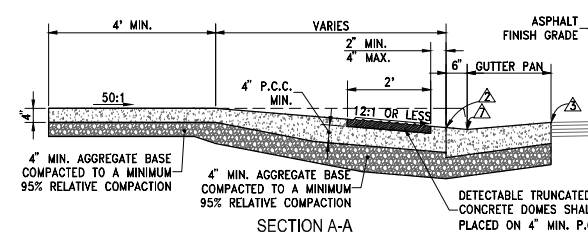
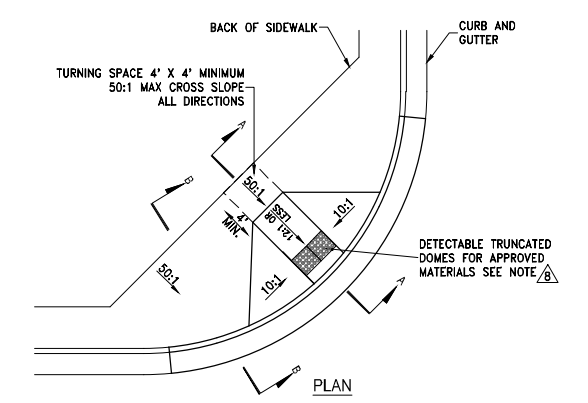
BY: \_\_\_\_\_  
 MARK: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISIONS: \_\_\_\_\_

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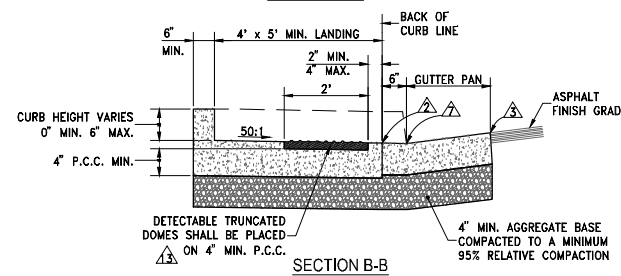
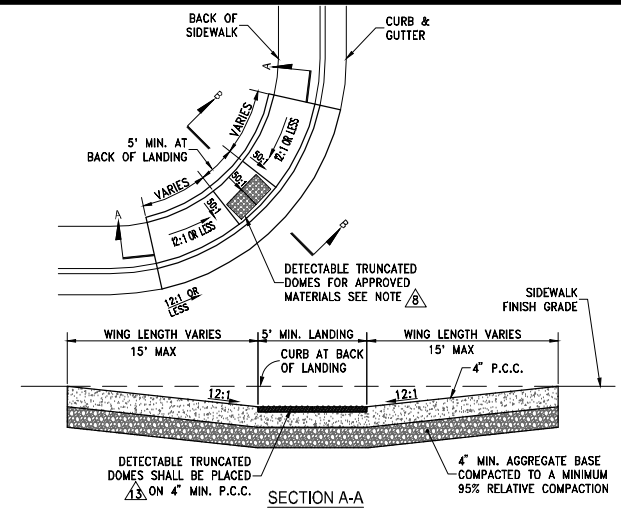


- NOTES:
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ± 1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE NO. 67.
  2. AGGREGATE BASE MATERIAL UNDER SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
  3. SIDEWALK WIDTH "W" SHALL BE 4 FT MIN. ON RESIDENTIAL STREETS AND 6 FT MIN. ON COLLECTOR AND ARTERIAL STREETS.
  4. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 5 FT INTERVALS AND ACCORDANCE WITH SECTION 312 OF THE SSPWC.
  5. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW SIDEWALK. DOWEL INTO EXISTING ADJACENT CONCRETE SIDEWALK WITH A MINIMUM OF TWO (2) NO. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W". DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.
  6. SIDEWALKS SHALL NOT BE POURED MONOLITHICALLY WITH CURBS.
  7. COLORED CONCRETE AND PAVERS ARE NOT ALLOWED.
  8. TUNNELING AND/OR BORING IS NOT ALLOWED.
  9. FIBER-REINFORCED P.C.C. SHALL NOT BE PLACED IN RIGHT-OF-WAY.

**1** SIDEWALK DETAIL  
C3.0 N.T.S.



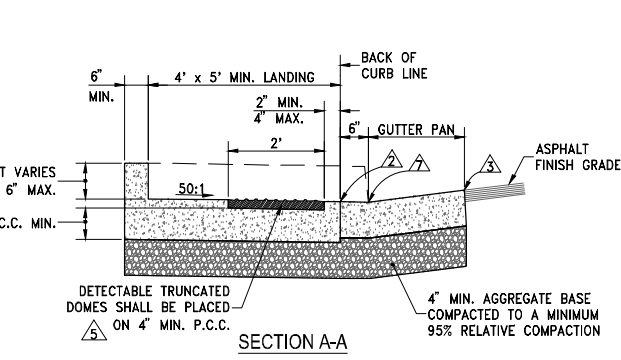
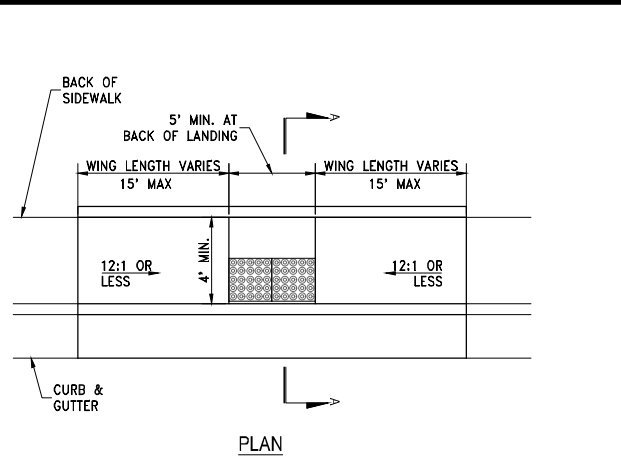
**5** PEDESTRIAN RAMP DETAIL  
C3.0 N.T.S.



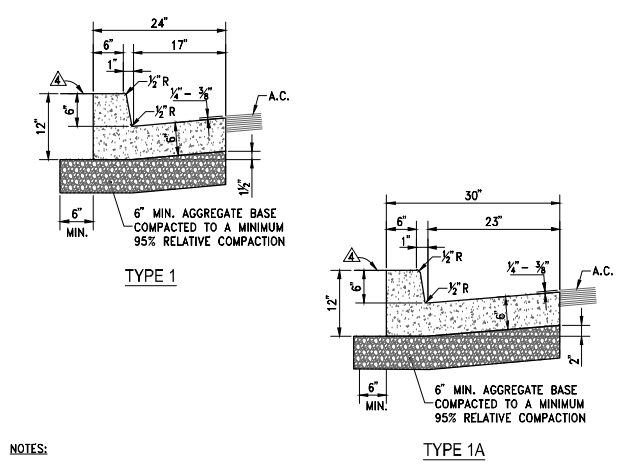
**2** PEDESTRIAN RAMP DETAIL  
C3.0 N.T.S.

1. STORM DRAIN INLETS OR SIMILAR ACCESSES SHALL NOT BE LOCATED IN THE AREA AT THE BASE OF THE CURB RAMP OR LANDING AREA. IF OBSTRUCTIONS SUCH AS INLETS, UTILITY POLES, PULL BOXES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL OF THE ENGINEER.
- NO LIP SHALL BE PERMITTED AT THE CURB RAMP SLOPE TO GUTTER PAN.
- PLANT MIX BITUMINOUS SURFACE SHALL BE FLUSH WITH THE EDGE OF THE GUTTER PAN IN THE AREA OF THE CURB RAMP.
- ROUGH BROOM TEXTURE ON CURB RAMPS AND WINGS.
- DETECTABLE WARNING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE PLACED ON MIN. SIX (6") INCHES OF P.C.C.
- ALL SLOPE RATES ARE RELATIVE TO LEVEL AND SHALL COMPLY WITH THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) STANDARDS, CURRENT VERSION.
- GUTTER SHALL MAINTAIN POSITIVE DRAINAGE TO PREVENT PONDING.
- DETECTABLE WARNING SHALL CONSIST OF PRECAST WETSET TILES WITH MIN. SIZE OF 2' X 2', COLOR DARK RED. APPROVED PRODUCTS INCLUDE: "CASTITACT", "TEKWAY DOME-TILES", AND "ACCESS TILE". DETECTABLE WARNING SHALL BE CONSTRUCTED PER MANUFACTURER'S INSTALLATION GUIDELINES AND CONFORM TO ADAAG.
- CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES
- AGGREGATE BASE MATERIAL UNDER PEDESTRIAN RAMPS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ± 1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE NO. 67.
- CONTRACTORS SHALL CORRECT ANY GRADE CONFLICT WITH EXISTING BOXES. THE ENGINEER SHALL MAKE THE FINAL DETERMINATION REGARDING THE DEGREE OF MODIFICATIONS REQUIRED BY THE CONTRACTOR FOR GRADE CONFLICTS BETWEEN EXISTING BOXES AND NEW PEDESTRIAN RAMPS.
- SIDEWALK AT BOTH SIDES OF RAMP MAY BE RECONSTRUCTED TO MINIMIZE THE GRADE AT A HORIZONTAL DISTANCE TO BE DETERMINED IN THE FIELD, UPON APPROVAL OF THE ENGINEER. SUBJECT TO PROWAG REQUIREMENTS. CURB AT THE BACK OF WALK MAY BE NEEDED. A TRANSITION SECTION OF SIDEWALK MAY BE NECESSARY TO MATCH CROSS SLOPE OF EXISTING SIDEWALK TO PEDESTRIAN RAMP IMPROVEMENTS. TRANSITION SECTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL CONSTRUCT ROUNDED CURBS WHERE THEY INTERSECT. RADIUS SHALL BE 1 FT MINIMUM MEASURED FROM FACE OF CURB. CURBS THAT INTERSECT AT A POINT SHALL NOT BE ALLOWED.

**6** PEDESTRIAN RAMP NOTES  
C3.0 N.T.S.

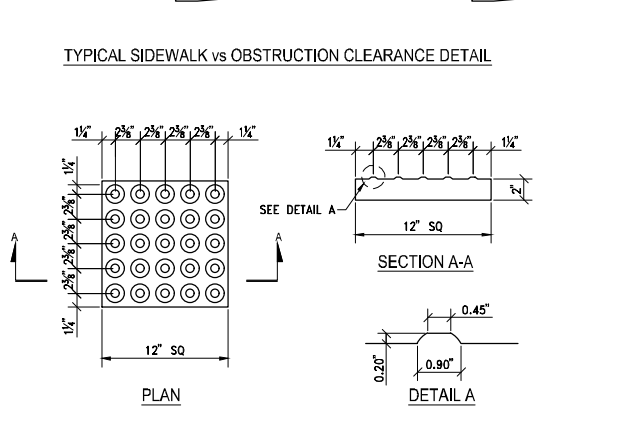
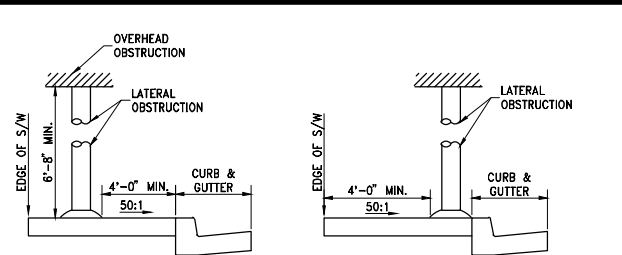


**3** PEDESTRIAN RAMP DETAIL  
C3.0 N.T.S.



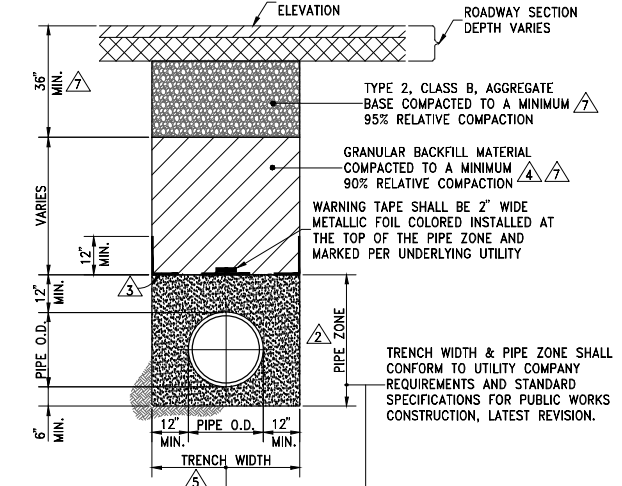
- NOTES:
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ± 1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE NO. 67.
  - AGGREGATE BASE MATERIAL UNDER AND BEHIND CURB AND GUTTER SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
  - WEAKENED PLANE JOINTS SHALL BE EVERY 10 FEET AND LOCATED ON THE BACK, TOP AND FACE OF THE CURB AND THE TOP OF THE GUTTER PAN.
  - CURB & GUTTER SECTIONS SHALL BE PLACED SEPARATELY FROM SIDEWALK SECTIONS. WHEN SIDEWALK IS NOT REQUIRED DIRECTLY BEHIND THE CURB, BACKFILL TO TOP OF CURB FOR A HORIZONTAL DISTANCE OF 12" FROM BACK FACE OF CURB AND COMPACT TO 90% RELATIVE COMPACTION.
  - FOR REPLACEMENT OF EXISTING CURB AND GUTTER, MATCH EXISTING TYPE.
  - FIBER-REINFORCED P.C.C. SHALL NOT BE PLACED IN RIGHT-OF-WAY.

**7** PCC CURB AND GUTTER DETAIL  
C3.0 N.T.S.



NOTE: FOR DETECTABLE TRUNCATED DOMES APPROVED MATERIALS SEE NOTE 8

**4** PEDESTRIAN RAMP DETAIL  
C3.0 N.T.S.



- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), 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% RELATIVE 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 MIRAFI 180N OR APPROVED EQUAL.
  - BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE 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% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

**8** TRENCH EXCAVATION/BACKFILL  
C3.0 N.T.S.

BY: \_\_\_\_\_  
REVISIONS: \_\_\_\_\_  
DATE: \_\_\_\_\_  
MARK: \_\_\_\_\_

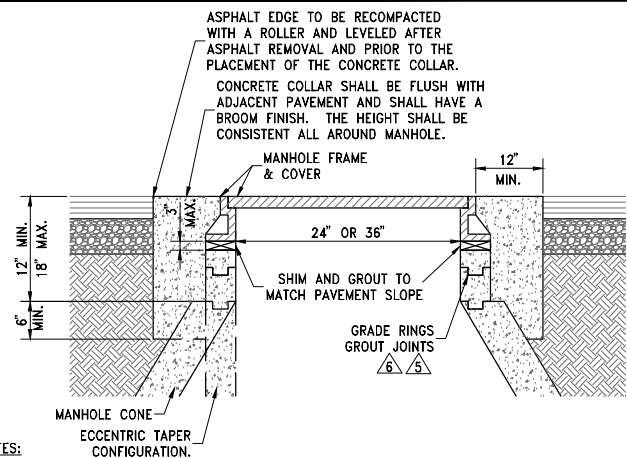
**CITY OF SPARKS**  
2018 CDBG STREET IMPROVEMENTS PROJECT  
**DETAILS**

NEVADA  
SPARKS

JOB NO. 17-107.00  
DESIGNED BY BEH/CH  
CHECKED BY CH/MW  
DATE 03-07-2018

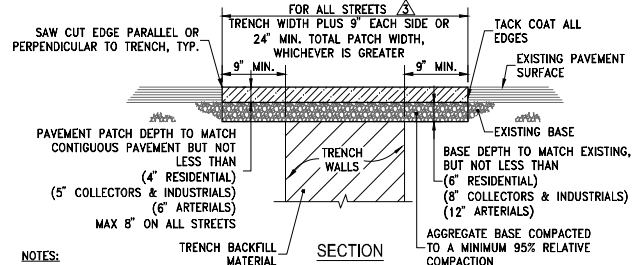
**BID SET**  
C3.0  
9

CFA, INC.  
LAND SURVEYORS  
CIVIL ENGINEERS  
LAND USE PLANNERS  
1150 CORPORATE BOULEVARD - RENO, NEVADA 89502  
775-866-1150 MAIN • 775-866-1160 FAX • CFA@CFAINC.COM



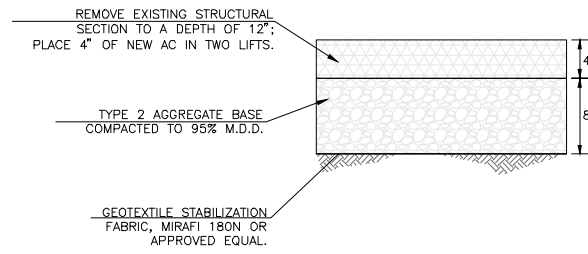
- NOTES:**
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. ALL MATERIALS SHALL CONFORM TO SSPWC.
  2. CIRCUMSTANCES MAY REQUIRE THE NEED FOR SPECIAL TYPES OF TOP OF MANHOLE CONFIGURATIONS SUCH AS FLAT TOP, ABOVE GROUND, ETC. AS DIRECTED BY THE CITY OF SPARKS. DETAILED PLANS OF ANY SPECIAL TOP OF MANHOLE CONFIGURATIONS AND ASSOCIATED COLLARS MUST BE APPROVED BY THE ENGINEER.
  3. IN UNPAVED AREAS, IT SHALL BE NECESSARY TO SET THE MANHOLE RIM APPROXIMATELY 6 INCHES ABOVE THE SURROUNDING AREA. INSTALL A 6 INCH THICK RING OF CONCRETE, TAPERED AT A 3:1 SLOPE, FROM THE TOP, OUTSIDE EDGE OF THE COLLAR TO THE EXISTING GROUND SURFACE.
  4. EXISTING SANITARY SEWER MANHOLE LIDS LOCATED IN GUTTER PANS, SHALL HAVE NEW WATER TIGHT FRAMES AND COVERS.
- △ ALL GRADE RING JOINTS ARE TO BE GROUTED WITH NON-SHRINK GROUT HAVING THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD AND SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO SSPWC.
- △ ALL GRADE RINGS SHALL BE PORTLAND CEMENT CONCRETE. PVC GRADE RINGS ARE NOT ALLOWED.

**1** MANHOLE COLLAR  
C3.1 N.T.S.



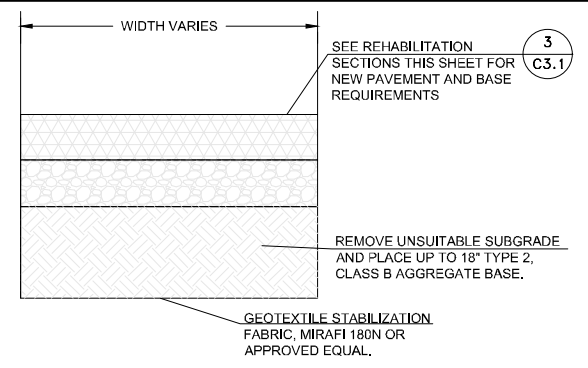
- NOTES:**
1. AN EXCAVATION/ENCROACHMENT PERMIT MUST BE OBTAINED FROM CITY OF RENO PRIOR TO CUTTING ANY PUBLIC RIGHT-OF-WAY.
  2. IF SAW CUT IS WITHIN 2 FEET OF AN EXISTING PAVEMENT EDGE OR EXISTING PAVEMENT PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
  3. ALL PERMANENT PATCH REPLACEMENT REQUIREMENTS ARE MINIMUM WIDTHS ONLY AND INCLUDES ALL AREAS WHERE THE ASPHALT PAVEMENT HAS BEEN UNDERMINED. THE CITY ENGINEER MAY REQUIRE WIDER PATCH SECTIONS OR OTHERWISE ALTER THESE REQUIREMENTS.
  4. AGGREGATE BASE MATERIAL UNDER BITUMINOUS PAVEMENT PATCH SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
  5. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF LOOP DETECTORS, ADJUSTMENT OF UTILITIES AND SURVEY MONUMENTS TO GRADE AND INSTALLATION OF PERMANENT PAVEMENT MARKINGS.
  6. FOR P.C.C. CURB REPLACEMENT, SAW CUT EXISTING PAVEMENT 18 INCHES MIN. FROM GUTTER LIP LINE, REMOVE AND REPLACE PAVEMENT TO SAW CUT EDGES; CONCRETE MAY BE POURED NEAT AGAINST EXISTING EDGE OF ASPHALT IF APPROVED BY CITY ENGINEER.

**2** PAVEMENT PATCH DETAIL  
C3.1 N.T.S.

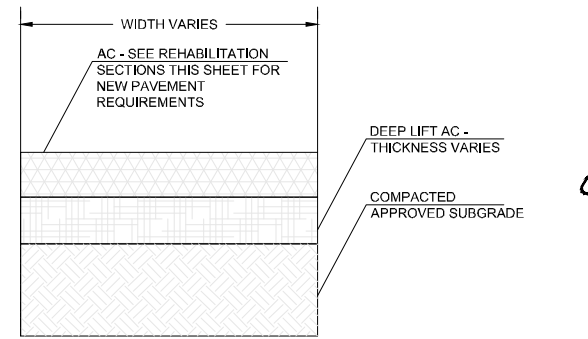


- STRUCTURAL PAVEMENT SECTION NOTES:**
- PLANT MIX BITUMINOUS PAVEMENT SHALL BE A TYPE 3, 50 BLOW, 3% AIR VOID MIX USING PG64-28NV ASPHALT CEMENT. AGGREGATES SHALL BE PRE-MARINATED WITH LIME PER NDOT SPECIFICATIONS. RECYCLED ASPHALT PAVEMENT (RAP) UP TO 15% WILL BE ALLOWED; HOWEVER, ALL VIRGIN AGGREGATES WILL BE SUBJECT TO LIME PRE-MARINATING PER NDOT SPECIFICATIONS.
- GEOTECHNICAL REPORT NOT PROVIDED. ROADWAY ASPHALT SECTION THICKNESS, AGGREGATE BASE, AND SUBGRADE PREPARATION HAS BEEN PROVIDED BY THE CITY OF SPARKS FOR ROADWAY IMPROVEMENTS. NO WARRANTIES OR GUARANTEES ARE IMPLIED OR PROVIDED FOR THE MATERIALS PERFORMANCE OF ROADWAY AREA. PLANS PROVIDE LIMITS OF ASPHALT, CURB AND GUTTER, AND REMOVAL OF PROPOSED IMPROVEMENTS ONLY.
- OVEREXCAVATE AND STABILIZE ANY UNSUITABLE SUBGRADE MATERIAL AS DIRECTED BY THE ENGINEER PRIOR TO PAVING OPERATIONS. REFERENCE DETAIL 4, SHEET C3.1.

**3** ASPHALT SECTION DETAIL  
C3.1 N.T.S.

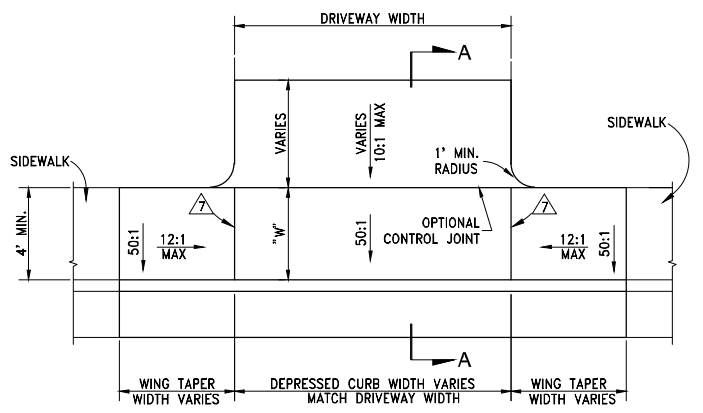


**TYPICAL STABILIZATION SECTION**  
NOTE: LIMITS OF OVEREXCAVATION, WIDTHS, AND DEPTH TO BE DETERMINED BY THE ENGINEER.

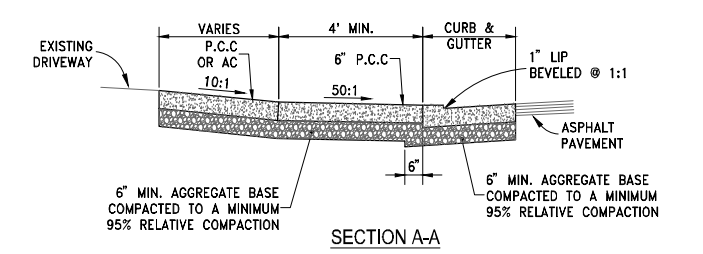


**ALTERNATE STABILIZATION SECTION**  
NOTE: LIMITS OF DEEP LIFT AC, WIDTHS, AND DEPTH TO BE DETERMINED BY THE ENGINEER.

**4** OVEREXCAVATION SECTION  
C3.1 FOR UNSUITABLE MATERIAL N.T.S.

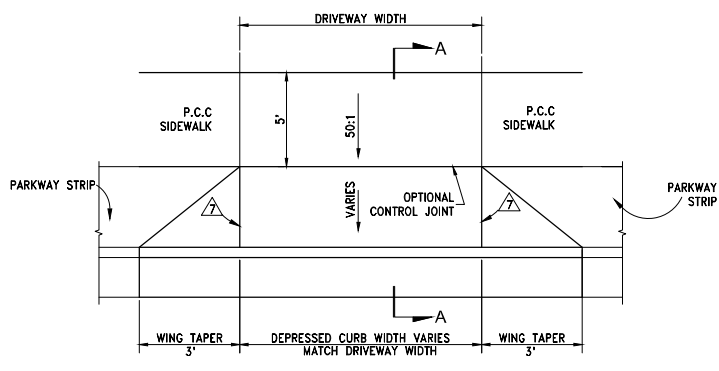


**PLAN**

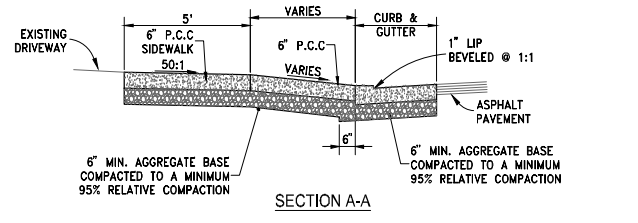


**SECTION A-A**

**5** P.C.C. DRIVEWAY APRON  
C3.1 DETAIL N.T.S.



**PLAN**

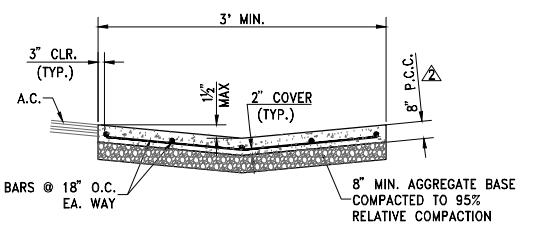


**SECTION A-A**

**6** P.C.C. DRIVEWAY APRON DETAIL  
C3.1 WITH PARKWAY STRIP N.T.S.

- NOTES:**
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67.
  2. AGGREGATE BASE MATERIAL UNDER DRIVEWAYS AND SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
  3. RESIDENTIAL DRIVEWAYS SHALL BE POURED SEPARATE FROM CURB AND GUTTER.
  4. COMMERCIAL DRIVEWAYS MAY BE POURED MONOLITHIC WITH CURB AND GUTTER. COMMERCIAL DRIVEWAYS TO HAVE #4 BARS AT 18\"/>

**7** P.C.C. DRIVEWAY APRON NOTES  
C3.1 N.T.S.



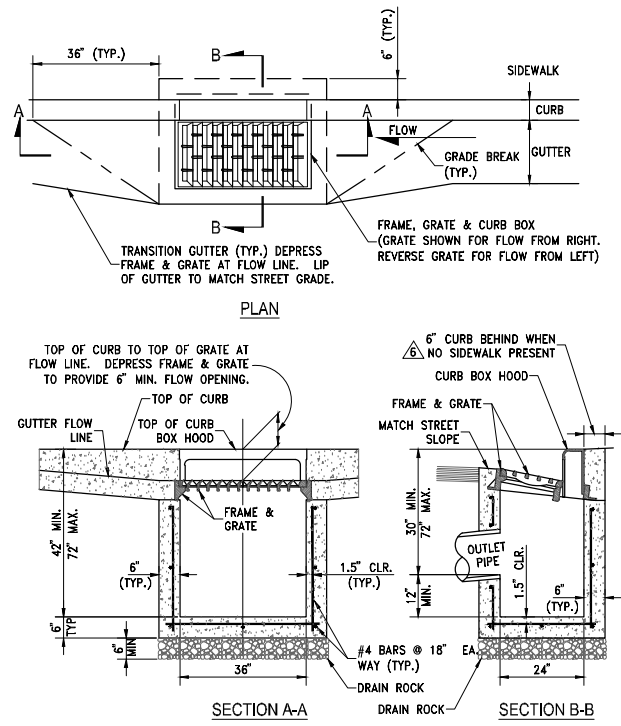
- NOTES:**
1. THIS GUTTER DESIGN IS FOR USE ON CITY STREETS.
  2. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. ALL MATERIALS SHALL CONFORM TO SSPWC.
  3. AGGREGATE BASE MATERIAL UNDER SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

**8** VALLEY GUTTER DETAIL  
C3.1 N.T.S.

BY	
REVISIONS	
MARK	
DATE	
CITY OF SPARKS 2018 CDBG STREET IMPROVEMENTS PROJECT <b>DETAILS</b>	
NEVADA	
SPARKS	
JOB NO.	17-107.00
DESIGNED BY	BEH/CH
CHECKED BY	CH/MW
DATE	03-07-2018
SHEET	
<b>C3.1</b>	
<b>9</b>	

**BID SET**

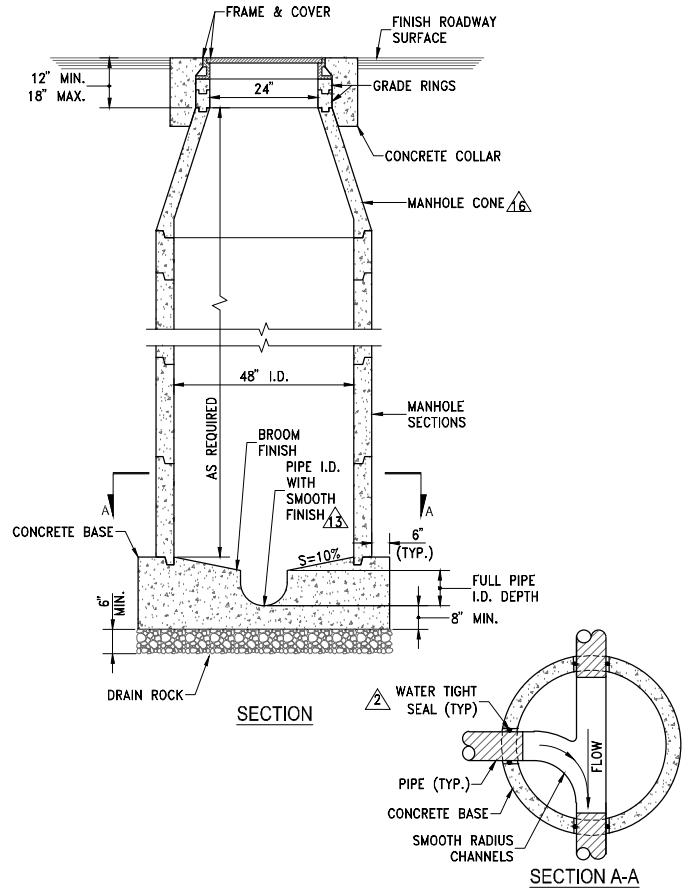




- NOTES:**
- P.C.C CURB AND GUTTER TRANSITION SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ± 1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. ALL MATERIALS SHALL CONFORM TO SSPWC.
  - REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" MINIMUM CLEAR COVER.
  - CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT UPON APPROVAL OF THE CITY ENGINEER. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
  - FRAME, GRATE AND CURB BOX HOOD ASSEMBLY SHALL BE D&L I-3519 WITH TYPE L "VANE GRATE" OR APPROVED EQUAL. GRATE SHALL BE INSTALLED WITH PROPER FLOW DIRECTION. EACH CATCH BASIN SHALL BE CAST WITH A FISH IMAGE AND THE WORDS "NO DUMPING! DRAINS TO WATERWAYS" IN THE TOP OF EACH CURB HOOD.
  - TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6" MIN. FLOW OPENING & INSTALL DURABLE SHIMS BETWEEN THE CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF CURB AND FACE OF CURB (SEE SECTION B-B).
  - WHEN SIDEWALK IS PRESENT CONCRETE BEHIND CURB BOX SHALL BE THICKENED TO THE FULL DEPTH OF THE CURB BOX. IF NO SIDEWALK IS PRESENT, POUR 6" CONCRETE CURB STRUCTURE BEHIND GRATE AND TIE BEAM INTO BOX.
  - ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.
  - FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT WITH MINIMAL GAPS.
  - CATCH BASIN SHALL NOT BE PLACED WITHIN THE RADIUS OF THE CURB.

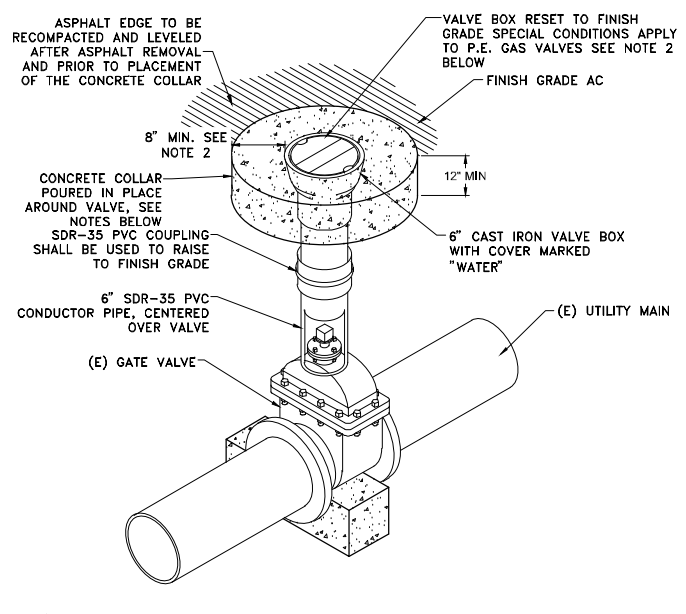
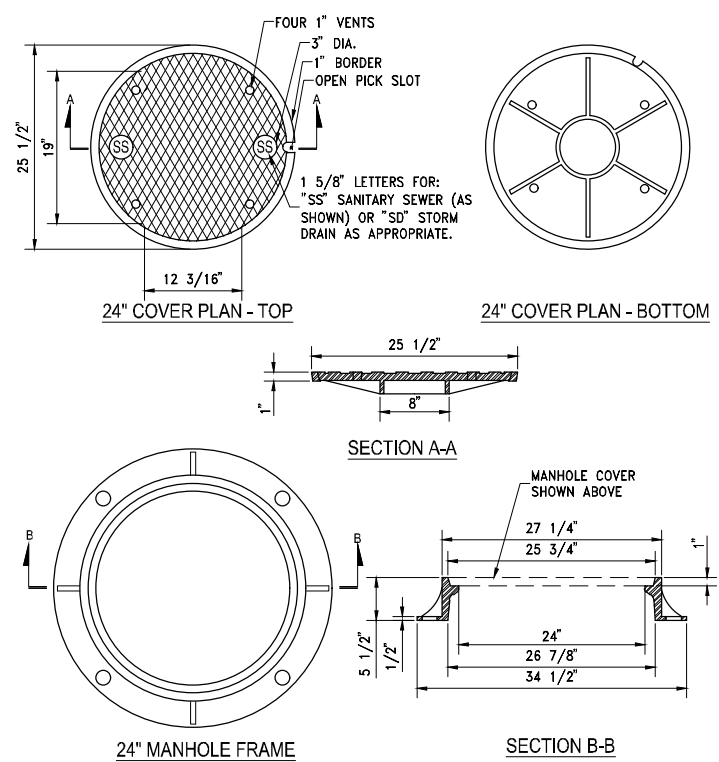
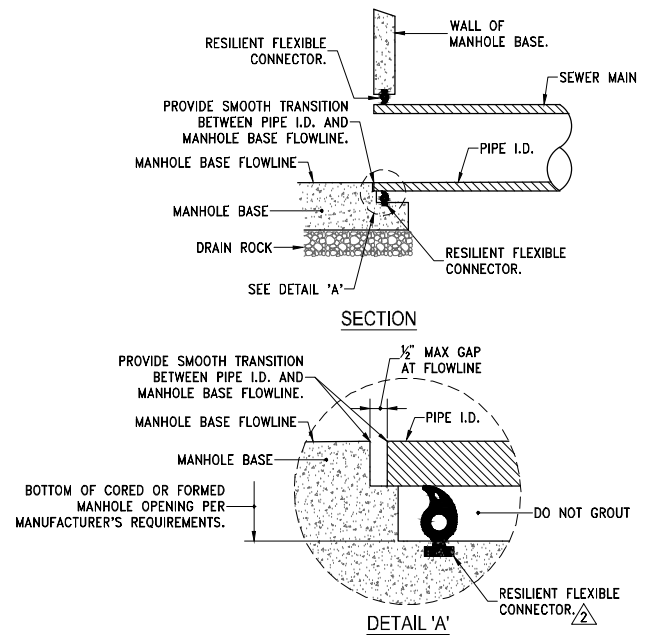
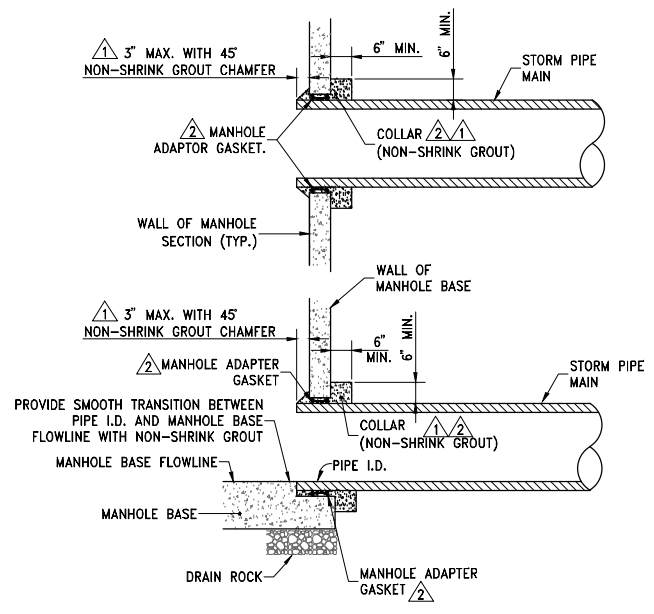
**1** CATCH BASIN TYPE 4-R DETAIL  
C3.2 N.T.S.

**2** NOTES - CATCH BASIN TYPE 4-R  
C3.2 N.T.S.



- 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 DETAILS 5 & 6 THIS SHEET.
  - 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 (SSPWC). 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 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 5 THIS SHEET.

**4** NOTES - MANHOLE TYPE I  
C3.2 N.T.S.



- NOTES:**
- CONCRETE COLLAR SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, AIR ENTRAINMENT 6% ± 1.5%, AND SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 200.02.02.
  - SPECIAL CONDITIONS APPLY TO P.E. GAS VALVES WITH TELESCOPING RISERS. CONTRACTORS SHALL NOT RAISE TO GRADE RISERS THAT HAVE BEEN CUT-OFF DURING LOWERING. RISERS CUT-OFF DURING LOWERING SHALL BE REMOVED COMPLETELY TO MAIN AND TAKEN TO NV ENERGY FOR EXACT MATERIAL REPLACEMENT PRIOR TO RAISING TO GRADE.
  - FOR MULTIPLE VALVE/RISER BOXES IN CLOSE PROXIMITY, A MONOLITHIC CONCRETE COLLAR MAY BE POURED.

**5** SD PIPE TO MANHOLE CONNECTION  
C3.2 N.T.S.

**6** RESILIENT FLEXIBLE CONNECTOR  
C3.2 N.T.S.

**7** 24" MANHOLE FRAME & COVER  
C3.2 N.T.S.

**8** VALVE BOX COLLAR  
C3.2 N.T.S.

BY:	
REVISIONS	
MARK	
DATE	
CITY OF SPARKS 2018 CDBG STREET IMPROVEMENTS PROJECT <b>DETAILS</b> NEVADA SPARKS	
JOB NO. 17-107.00	DESIGNED BY BEH/CH
CHECKED BY CH/MW	
DATE 03-07-2018	
<b>BID SET</b> SHEET <b>C3.2</b> 9 OF	