

# CCWRD NOTES

WHERE NEWLY CONSTRUCTED STORM DRAINS ARE TO CROSS OVER EXISTING SANITARY SEWER LINES, CCWRD INSPECTOR MUST BE PRESENT WHEN SEWER IS EXPOSED AND WHEN PIPE/CHANNEL BEDDING MATERIAL IS BEING COMPACTED OVER THE SEWER. CLEANING SHALL BE REQUIRED AFTER NEW STORM DRAIN/CHANNEL IS COMPLETED. CONTRACTOR SHALL GIVE 24-HOUR ADVANCE NOTICE TO CCWRD INSPECTOR FOR CLEANING. WITH CCWRD INSPECTOR PRESENT, CONTRACTOR SHALL PERFORM, AT THEIR OWN COST, CLEANING OF THE EXISTING SEWER IN AREAS UNDER NEW STORM DRAINS. CCWRD INSPECTIONS CAN BE REACHED AT 702-668-8205

ALL OTHER PROVISIONS AND GENERAL NOTES OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, 3RD EDITION, 2009 APPLY. THEY CAN BE DOWNLOADED FROM WWW.CLEANWATERTEAM.COM

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS, THE UNIFORM STANDARDS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY, NEVADA, AS AMENDED, AND THE UNIFORM PLUMBING CODE. CONTRACTOR SHALL ADVISE THE CONTROLLING AGENCY OF ANY CONFLICTS DISCOVERED BETWEEN THESE SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK GOVERNED BY THE CONFLICTING REQUIREMENTS. THE ENGINEER AND/OR CONTRACTOR SHALL PROPOSE A RESOLUTION TO THE CONFLICT FOR REVIEW BY THE AGENCY PRIOR TO PERFORMING THE WORK AFFECTED BY THE CONFLICT. THE RESOLUTION SHALL GENERALLY BE IN THE MANNER THAT YIELDS THE HIGHER QUALITY AND/OR PERFORMANCE OF THE WORK. THE CONTROLLING AGENCY SHALL ISSUE WRITTEN APPROVAL FOR THE RESOLUTION OF THE CONFLICT WHICH SHALL BECOME A PART OF THE CONSTRUCTION DOCUMENTS FOR THE WORK.
- THESE STANDARDS APPLY TO ALL CONSTRUCTION.
- SEWER MAINS SHALL BE LAID INDIVIDUALLY IN TRENCHES THAT ARE INDEPENDENT FROM THE TRENCHES FOR OTHER UTILITIES.
- ALL LATERALS SHALL BE LAID AT SLOPES NOT LESS THAN THE MINIMUM SLOPES SHOWN IN THESE SPECIFICATIONS.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PERFORM CONSTRUCTION IN FULL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. SHOULD THE ENGINEER OR CONTRACTOR WISH TO MAKE CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS, SUCH CHANGES SHALL BE APPROVED BY THE AGENCY PRIOR TO CONSTRUCTION OF THE AFFECTED IMPROVEMENTS. CHANGES CONSTRUCTED WITHOUT AGENCY APPROVAL SHALL BE REMOVED BY THE CONTRACTOR AT ITS OWN EXPENSE AND THE WORK CONSTRUCTED AS DEPICTED IN THE APPROVED CONSTRUCTION DOCUMENTS.
- SOIL TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 3.15 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
- ALL AIR TESTING, VISUAL INSPECTIONS, SYSTEM CLEANING, DEFLECTION TESTING, TELEVISION, PRESSURE TESTING AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH SECTION 3.19 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
- CUT SHEETS CONFORMING TO SECTION 3.6 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CONTROLLING AGENCY FOR REVIEW BEFORE BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL AUTHORIZED BY THE AGENCY.
- CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE AGENCY SHALL POSSESS A CLASS "A" LICENSE PER THE NEVADA STATE CONTRACTOR'S BOARD.
- WHEN CONNECTING TO AN EXISTING STUB, CONTRACTOR SHALL CLEAN AND TEST BOTH THE NEW AND EXISTING PORTIONS OF THE LINE TO THE NEXT MANHOLE UPSTREAM/DOWNSTREAM.
- ALL SANITARY SEWER MANHOLES SHALL BE LOCATED AND CONSTRUCTED SUCH THAT THEY ARE ACCESSIBLE TO CONVENTIONAL SEWER MAINTENANCE VEHICLES AT ALL TIMES AND UNDER ALL WEATHER CONDITIONS. THOSE MANHOLES INSTALLED ALONG ACCESS ROADS HAVING SINGLE POINTS OF ENTRY AND EGRESS (I.E "DEAD-END ROADS") SHALL HAVE AT LEAST ONE LOCATION ALONG THE ACCESS ROAD HAVING SUFFICIENT WIDTH TO ALLOW TURN-AROUNDS OF VEHICLES HAVING INSIDE TURNING RADI OF 50-FEET.
- ALL SEWER MAINS UNDER CONSTRUCTION SHALL HAVE A DEBRIS TRAP PER STANDARD DRAWING SD-30 AT THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM UNTIL ALL CONSTRUCTION ACTIVITIES, INCLUDING FINAL TESTING, ARE COMPLETED AND THE SEWER IS READY FOR FINAL ACCEPTANCE BY THE AGENCY.
- ALL MANHOLES UNDER CONSTRUCTION SHALL HAVE PLUGS PLACED IN THEIR OUTLET PIPES DURING ALL CONSTRUCTION ACTIVITIES TO PREVENT THE MIGRATION OF SEWER CONSTRUCTION DEBRIS DOWNSTREAM. THESE PLUGS MAY BE REMOVED FOR SHORT PERIODS AS NECESSARY TO ACCOMPLISH FINAL SEWER CLEANING AND TESTING TASKS PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS.
- PRIOR TO ANY SEWER MAIN BEING PLACED IN SERVICE AND AS A CONDITION OF FINAL ACCEPTANCE, ALL NEW SEWER MAINS SHALL BE TELEVIEWED IN ACCORDANCE WITH SECTION 3.19.1.a OF THE STANDARD SPECIFICATIONS.
- IF ANY EXISTING MANHOLE HAVING A LINING SYSTEM IS BEING MODIFIED AS PART OF THE CONSTRUCTION OF THE NEW SANITARY SEWER, THAT LINING SYSTEM SHALL BE RESTORED TO ITS ORIGINAL CONDITION PRIOR TO THE MODIFICATIONS USING LINING MATERIALS AND SYSTEMS THAT ARE FULLY COMPATIBLE WITH THE ORIGINAL LINING.

- FIELD-INSTALLED SEWER LINING SYSTEMS MAY NOT BE INSTALLED UNTIL AFTER ALL MANHOLE CONSTRUCTION TASKS ARE COMPLETED, INCLUDING BACKFILLING AND INITIAL GRADE ADJUSTMENTS, BUT PRIOR TO FINAL GRADE ADJUSTMENT.
- NEW SEWERS HAVING GRADES OF 0.5 PERCENT OR LESS SHALL BE STAKED FOR CONSTRUCTION AT A MAXIMUM OF 25-FEET ON CENTER.
- SEWER LATERALS SHALL BE CONNECTED TO SEWER MAINS ONLY. LATERALS MAY NOT BE CONNECTED TO SANITARY SEWER MANHOLES UNLESS APPROVED BY THE AGENCY.
- SEWER PIPE MATERIAL, PIPE SPECIFICATION, WALL THICKNESS, INTERNAL DIAMETER AND PIPE SLOPE SHALL BE UNIFORM BETWEEN MANHOLES. CHANGES IN PIPE MATERIALS, SPECIFICATIONS, WALL THICKNESS, INTERNAL DIAMETERS AND/OR PIPE SLOPES SHALL BE MADE AT MANHOLES ONLY.

- LOCATOR RIBBON AND MARKER BALLS SHALL BE PLACED ABOVE ALL NEW SANITARY SEWERS, LATERALS AND FORCE MAINS IN ACCORDANCE WITH SECTION 3.14 OF THE DESIGN STANDARDS.
- WHEN ADJUSTING MANHOLES, THE CONTRACTION SHALL INSTALL PLYWOOD COVERS IN SANITARY SEWER MANHOLE INVERTS AS WELL AS STEEL PLATE COVERS OVER MANHOLES ( AFTER MANHOLE RINGS/FRAMES ARE REMOVED) TO PREVENT DEBRIS FROM ENTERING SEWER MAHESH AND CORRESPONDING LINES. DEBRIS IN THE MANHOLES SHALL BE REMOVED PRIOR TO PLYWOOD REMOVAL.

PLYWOOD AND STEEL COVERS FOR MANHOLES SHALL BE INSTALLED AND REMOVED IN THE PRESENCE OF CCWRD INSPECTOR. ALL DEBRIS DROPPED INTO THE SEWER MANHOLES AND CORRESPONDING LINES SHALL BE RETRIEVED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CLEAN (E.G., JET VAC OR EQUIVALENT) THE DEBRIS OUT OF THE AFFECTED MANHOLES AND/OR SEWER LINES IN THE PRESENCE OF THE CCWRD INSPECTOR AND APPROVED BY THE CONSTRUCTION MANAGER.

SIGNATURE ON THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF ANY VIOLATION OF CLARK COUNTY WATER RECLAMATION DISTRICT RULES, REGULATIONS, OR DESIGN AND CONSTRUCTION STANDARDS

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 9214.14  
 CONTROL NUMBER  
 THE APPROVAL OF THESE DRAWINGS DOES NOT GUARANTEE CAPACITY IN THE DISTRICT'S COLLECTION OR TREATMENT SYSTEM.

# NV ENERGY REVIEW

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

APPROVAL:  
 \_\_\_\_\_  
 NV Energy Date

# LVVWD NOTES

PROJECT # 123197

- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. **WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.**
- ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
- ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
- ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
- ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
- THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802 TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
- THE CONTRACTOR SHALL NOTIFY LAS VEGAS VALLEY WATER DISTRICT (LVVWD) CONSTRUCTION DIVISION AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION ON ANY POTABLE WATER FACILITY IN THIS PROJECT.
  - NOTICE SHALL BE GIVEN BY 2:00 P.M., THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION.
  - WHEN CALLING FOR AN INSPECTION, REFER TO THE LVVWD PROJECT NUMBER.
- ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE LISTED ON THE LVVWD PRE-APPROVED MATERIAL AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
- TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
- THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE PLACEMENT OF A APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON HE STREET SURFACE.
 

ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR HE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.
- PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

APPROVED FOR CONSTRUCTION

Las Vegas Valley Water District Engineering Services Manager  
 Sheets: I-1 TO I-4, R-1, R-4 TO R-7, R-9, TY-15, PL-1, PL-4 TO PL-7, PL-9, PR-1, PR-4 TO PR-7, PR-9, U-3 & D-3  
 Date \_\_\_\_\_ Project No. 123197

# ABBREVIATIONS

@	ABUT	AT	MATL	MATERIAL
ACP	ABUTMENT	AT	MAX	MAXIMUM
AGG	ASBESTOS CEMENT PIPE	AGGREGATE	MFR.	MANUFACTURER
APPROX	APPROXIMATE	APPROXIMATE	MH	MANHOLE
AVAR	AIR VACUUM AIR RELEASE	AIR VACUUM AIR RELEASE	MIN	MINIMUM
AVE	AVENUE	AVENUE	MPU	MASTER PLAN UPDATE
BB	BEGIN BRIDGE	BEGIN BRIDGE	N	NORTH
BC	BACK OF CURB	BACK OF CURB	No	NUMBER
BOT	BOTTOM	BOTTOM	NTS	NOT TO SCALE
BRG	BEARING	BEARING	OC	ON CENTER
CC	CLARK COUNTY	CLARK COUNTY	OD	OUTSIDE DIAMETER
CCFP	CENTRIFUGALLY CAST FIBERGLASS PIPE	CENTRIFUGALLY CAST FIBERGLASS PIPE	O.F.	OUTSIDE FACE
CCRFCD	CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT	CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT	OPP	OPPOSITE
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT	CLARK COUNTY WATER RECLAMATION DISTRICT	PBS	PLANTMIX BITUMINOUS SURFACE
CFS	CUBIC FEET PER SECOND	CUBIC FEET PER SECOND	PC	POINT OF CURVATURE
CIP	CAST IN PLACE	CAST IN PLACE	PE	POLYETHYLENE
C&G	CURB AND GUTTER	CURB AND GUTTER	PG or PGL	PROFILE GRADE
CL	CENTERLINE	CENTERLINE	PI	POINT OF INTERSECTION
CLR	CLEAR	CLEAR	PL	PROPERTY LINE
CMU	CONCRETE MASONRY UNIT	CONCRETE MASONRY UNIT	PNT	POINT
CMP	CORRUGATED METAL PIPE	CORRUGATED METAL PIPE	P/T	POST-TENSION
COMM DWY	COMMERCIAL DRIVEWAY	COMMERCIAL DRIVEWAY	PVMT	PAVEMENT
CONC	CONCRETE	CONCRETE	RCB	REINFORCED CONCRETE BOX
CONST or CST	CONSTRUCTION OR CONSTRUCT	CONSTRUCTION OR CONSTRUCT	RCP	REINFORCED CONCRETE PIPE
CONT	CONTINUOUS	CONTINUOUS	PT	POINT OF TANGENCY
CT	COURT	COURT	PVI	POINT OF VERTICAL INTERSECTION
DCSWCS	DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS	DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS	REINF	REINFORCING
DET	DETAIL	DETAIL	RP	RADIUS POINT
DI	DROP INLET	DROP INLET	RT	RIGHT
DIA	DIAMETER	DIAMETER	R/W	RIGHT OF WAY
DIAG	DIAGONAL	DIAGONAL	S	SOUTH
DIAPH	DIAPHRAGM	DIAPHRAGM	SD	STORM DRAIN
DR	DRIVE	DRIVE	SDMH	STORM DRAIN MANHOLE
DWG	DRAWING	DRAWING	SPA	SPACE
DWY	DRIVEWAY	DRIVEWAY	SS	SANITARY SEWER
E	EAST	EAST	SSMH	SANITARY SEWER MANHOLE
EB	END BRIDGE	END BRIDGE	ST	STREET
EF	EACH FACE	EACH FACE	STL	STEEL
EG	EXISTING GROUND	EXISTING GROUND	STD	STANDARD
ELEV or EL	ELEVATION	ELEVATION	SW	SIDEWALK
EOD	EDGE OF DECK	EDGE OF DECK	SWG	SOUTHWEST GAS
EP	EDGE OF PAVEMENT	EDGE OF PAVEMENT	T	TANGENT
EQ SPA	EQUAL SPACING	EQUAL SPACING	TC	TOP OF CURB
EW	EACH WAY	EACH WAY	TOF	TOP OF FOOTING
EXIST or EX	EXISTING	EXISTING	TRW	TOP OF RETAINING WALL
EXP	EXPANSION	EXPANSION	TW	TOP OF WALL
FG	FINISHED GRADE	FINISHED GRADE	TRANS	TRANSITION
FIX	FIXED	FIXED	TRANSV	TRANSVERSE
FL	FLOW LINE	FLOW LINE	(TYP)	TYPICAL
FRPM	FIBERGLASS REINFORCED POLYMER MORTAR	FIBERGLASS REINFORCED POLYMER MORTAR	UG CATV	UNDERGROUND CABLE TV
GB	GRADE BREAK	GRADE BREAK	UGE	UNDERGROUND ELECTRIC
HGL	HYDROLIC GRADE LINE	HYDROLIC GRADE LINE	UGT	UNDERGROUND TELEPHONE
HORIZ	HORIZONTAL	HORIZONTAL	USD or USDOCA	UNIFORM STANDARD DRAWING
HP	HIGH POINT	HIGH POINT	UTACS	ULTRA THIN ASPHALT CONCRETE SURFACE
HPS	HIGH PRESSURE SODIUM	HIGH PRESSURE SODIUM	VC	VERTICAL CURVE
I.F.	INSIDE FACE	INSIDE FACE	VCP	VITRIFIED CLAY PIPE
INST	INSTRUMENT	INSTRUMENT	VG	VALLEY GUTTER/ CONC CROSS GUTTER
INV	INVERT	INVERT	VPI	VERTICAL POINT OF INTERSECTION
JT or JNT	JOINT	JOINT	VPC	VERTICAL POINT OF CURVE
LF	LINEAR FEET	LINEAR FEET	VPT	VERTICAL POINT OF TANGENCY
LN	LANE	LANE	W/	WITH
LOMR	LETTER OF MAP REVISION	LETTER OF MAP REVISION	WS	WATER SURFACE
LONGIT	LONGITUDINAL	LONGITUDINAL	WTR	WATER
LT	LEFT	LEFT		
LVVWD	LAS VEGAS VALLEY WATER DISTRICT	LAS VEGAS VALLEY WATER DISTRICT		

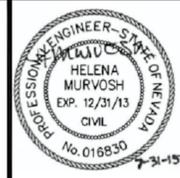
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1	7/31/15	UPDATE LVVWD NOTES		HM	
REV No.	DATE	DESCRIPTION		APPROVED	



# LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS

## GENERAL NOTES & ABBREVIATIONS

CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: S. ELIZONDO  
 DRAWN BY: H. MURVOSH  
 CHECKED BY: H. MURVOSH  
 DATE: July 6, 2015

**Stanley Consultants INC.**  
 9820 SOUTH EASTERN AVENUE, SUITE 200  
 LAS VEGAS, NEVADA 89119 (702) 369-9396  
 A Stanley Group Company: Engineering, Environmental Sciences, and Construction Services Worldwide

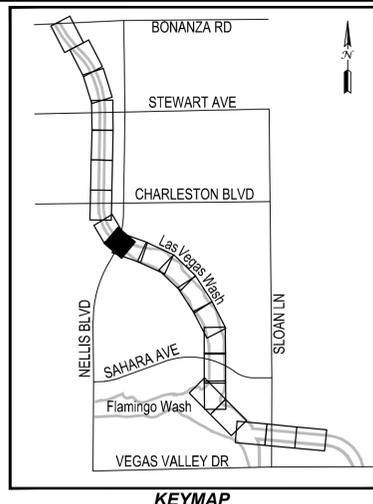
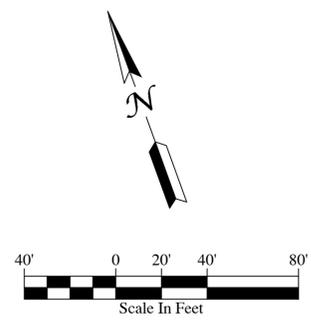
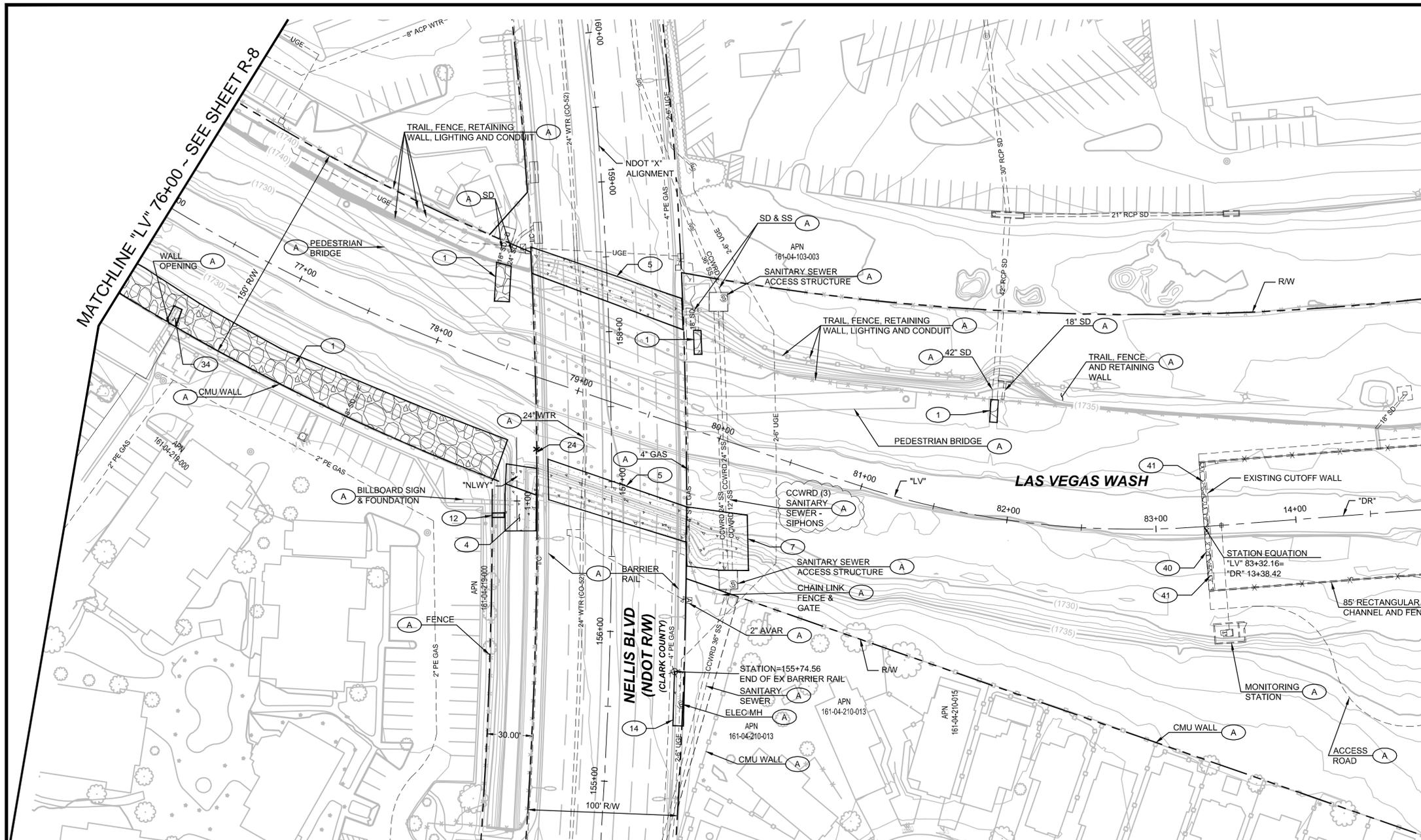
SCALE  
 HORIZ: NONE  
 VERT: NONE  
 FIELD BOOK  
 WORK ORDER  
 PROJECT No. 24523

L-2031  
 DRAWING NO.  
**I-3**  
 SHT: 3 OF 90

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LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS





- REMOVAL NOTES**
- (A) PROTECT IN PLACE
  - (1) REMOVE EXISTING RIPRAP
  - (4) "NLWY" 0+80 TO "NLWY" 1+24 REMOVE EXISTING REINFORCED CONCRETE TRAPEZOIDAL CHANNEL
  - (5) REMOVE EXISTING REINFORCED CONCRETE PAD AND SLOPE PAVING
  - (7) REMOVE EXISTING CONCRETE SLOPE
  - (12) "NLWY" 0+88, 16.5' LT TO 8.5' LT REMOVE EXISTING CONCRETE U-CHANNEL TO R/W
  - (14) NDOT "X" 155+39 TO NDOT "X" 155+75 REMOVE EXISTING SIDEWALK, CURB AND GUTTER
  - (24) NDOT "X" 157+18.69, 50' LT TO NDOT "X" 157+24.76, 50' LT REMOVE EXISTING CHAIN-LINK FENCE. SEE SS-13
  - (34) REMOVE EXISTING CONCRETE GUTTER TO R/W
  - (40) REMOVE EXISTING SHEET PILE WALL TO 3' BELOW BOTTOM OF SUBGRADE
  - (41) REMOVE EXISTING RIPRAP AND CLSM UNDER EXISTING 85' CHANNEL. PLACE NON-WOVEN GEOTEXTILE FABRIC ON BOTTOM OF VOID. FILL VOID AREA WITH DRAIN ROCK.

- LEGEND**
- FENCE TO BE REMOVED
  - RIPRAP TO BE REMOVED
  - CONCRETE TO BE REMOVED

**CCWRD NOTE:**  
 CCWRD INSPECTION TO BE CONTACTED @ 702-668-8205 24 HOURS PRIOR TO WORK IN THE VICINITY OF THE SEWER.

SIGNATURE ON THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF ANY VIOLATION OF CLARK COUNTY WATER RECLAMATION DISTRICT RULES, REGULATIONS, OR DESIGN AND CONSTRUCTION STANDARDS

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 9214.14  
 CONTROL NUMBER  
 THE APPROVAL OF THESE DRAWINGS DOES NOT GUARANTEE CAPACITY IN THE DISTRICT'S COLLECTION OR TREATMENT SYSTEM.

APPROVED FOR CONSTRUCTION  
 Las Vegas Valley Water District Engineering Services Manager  
 Date \_\_\_\_\_ Project No. 123197

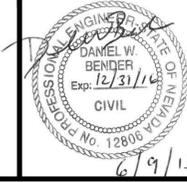


AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.  
**Call before you Dig**  
**Overhead**  
 1-702-227-2929  
 NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

8				
7				
6				
5				
4				
3				
2				
1	7/31/15	UPDATE LABEL		HM
REV No.	DATE	DESCRIPTION		APPROVED



**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
 REMOVAL PLAN  
 "LV" 76+00 TO "LV" 83+32.16  
 CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: H. MURVOSH  
 DRAWN BY: S. ELIZONDO  
 CHECKED BY: D. BENDER  
 DATE: July 31, 2015

**Stanley Consultants INC.**  
 9820 SOUTH EASTERN AVENUE, SUITE 200  
 LAS VEGAS, NEVADA 89119 (702) 369-9396

SCALE  
 HORIZ: 1"=40'  
 VERT: NONE

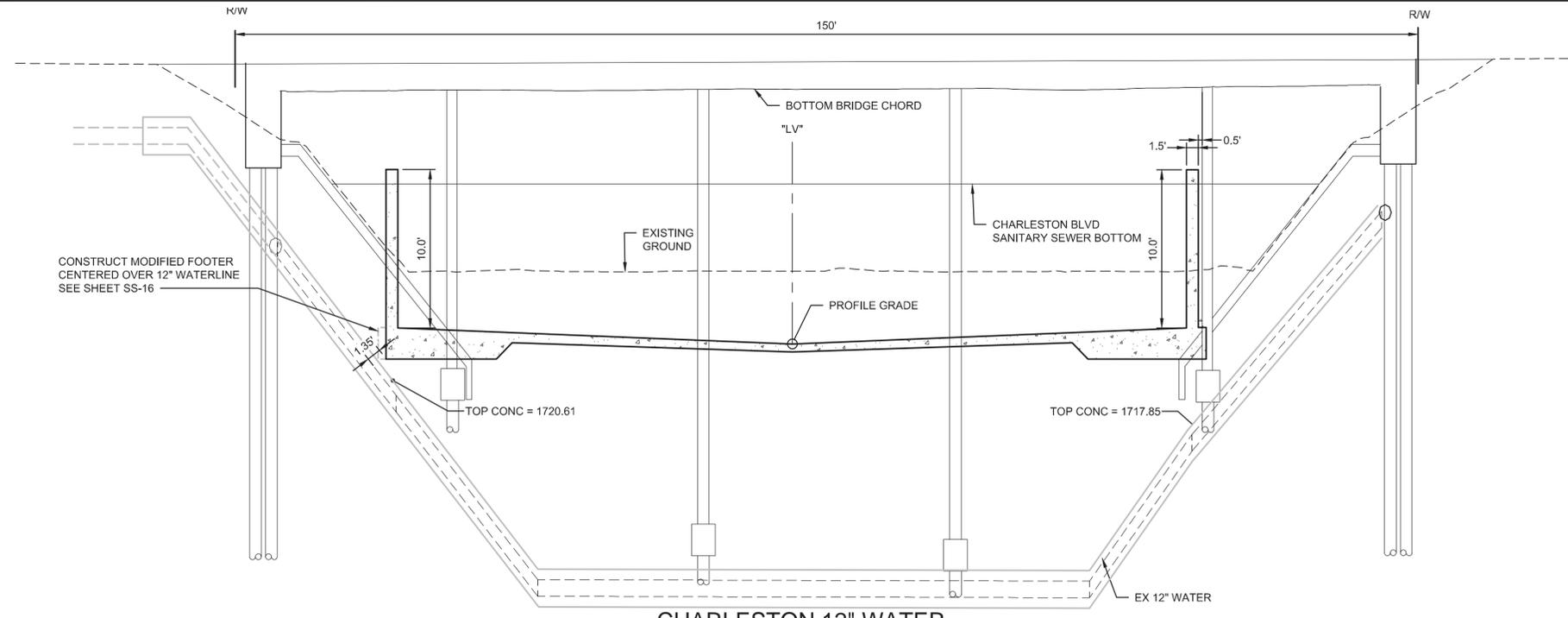
FIELD BOOK  
 WORK ORDER

PROJECT No. 24523 SHT: 13 OF 90

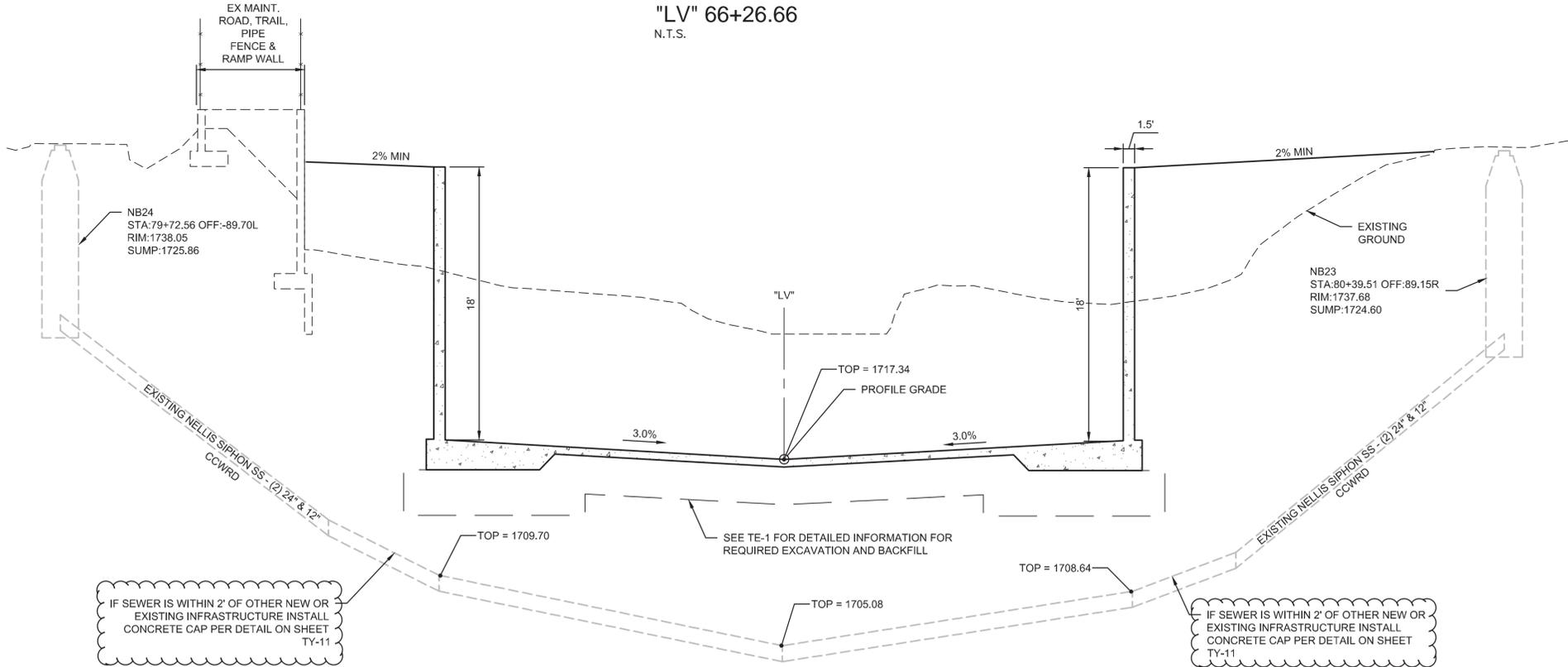
**L-2031**  
 DRAWING NO.  
**R-9**

LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS





**CHARLESTON 12" WATER**  
 "LV" 66+26.66  
 N.T.S.



**SEWER SIPHON AT NELLIS BLVD**  
 "LV" 80+06.00  
 N.T.S.

- NOTES:
- REFER TO "SS-4" STRUCTURAL SHEETS FOR PRECISE DIMENSIONS AND REINFORCEMENT FOR CONCRETE CHANNEL.
  - PROTECT EXISTING PROPERTY WALLS @ RIGHT OF WAY.
  - SEE SHEET TE-1 FOR EXCAVATION, BEDDING, & BACKFILL DETAILS.
  - TOP OF CONCRETE ELEVATIONS FOR 12" WATER FROM POTHOLES BY LAS VEGAS PAVING.
  - WATERLINE PROFILE FROM AS-BUILT DRAWING BY WALLACE-MONTGOMERY, 1971.

SIGNATURE ON THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF ANY VIOLATION OF CLARK COUNTY WATER RECLAMATION DISTRICT RULES, REGULATIONS, OR DESIGN AND CONSTRUCTION STANDARDS

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**APPROVED FOR CONSTRUCTION**

Las Vegas Valley Water District Engineering Services Manager  
 Date \_\_\_\_\_ Project No. 123197

- NOTE:
- REFER TO "SS-4" STRUCTURAL SHEETS FOR PRECISE DIMENSIONS AND REINFORCEMENT FOR CONCRETE CHANNEL.
  - PROTECT EXISTING PROPERTY WALLS @ RIGHT OF WAY.
  - SEE SHEET TE-1 FOR EXCAVATION, BEDDING, & BACKFILL DETAILS.
  - TOP SEWER ELEVATIONS FROM POTHOLES BY LAS VEGAS PAVING.
  - SEE SECTION 630 OF PROJECT SPECIAL PROVISIONS AND DCSWCS, LATEST EDITION, FOR ADDITIONAL REQUIREMENTS.
  - CCWRD INSPECTIONS TO BE CONTACTED AT (702) 668-8205 24 HOURS PRIOR TO WORK IN VICINITY OF SEWER.

IF SEWER IS WITHIN 2' OF OTHER NEW OR EXISTING INFRASTRUCTURE INSTALL CONCRETE CAP PER DETAIL ON SHEET TY-11

IF SEWER IS WITHIN 2' OF OTHER NEW OR EXISTING INFRASTRUCTURE INSTALL CONCRETE CAP PER DETAIL ON SHEET TY-11

**FAST**  
 Call before you Dig  
 UnderGround  
 1-702-432-5300

AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.  
**Call before you Dig**  
**Overhead**  
 1-702-227-2929  
 NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

**Call before you Dig**  
**UnderGround**  
 1-702-432-5300

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.  
**Call before you Dig**  
**811**

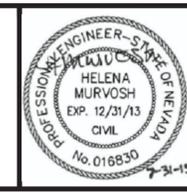
REV No.	DATE	DESCRIPTION	APPROVED
7/31/15		UPDATED NOTES	HM



**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**

**TYPICAL CHANNEL SECTIONS**

CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS

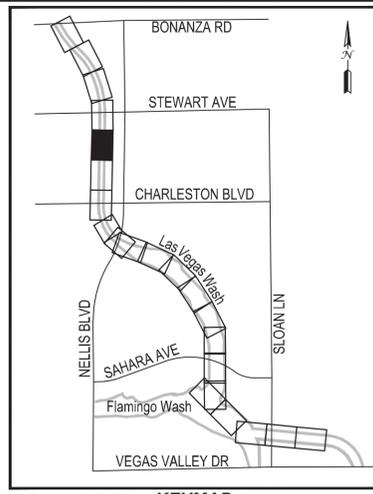
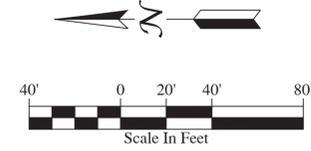
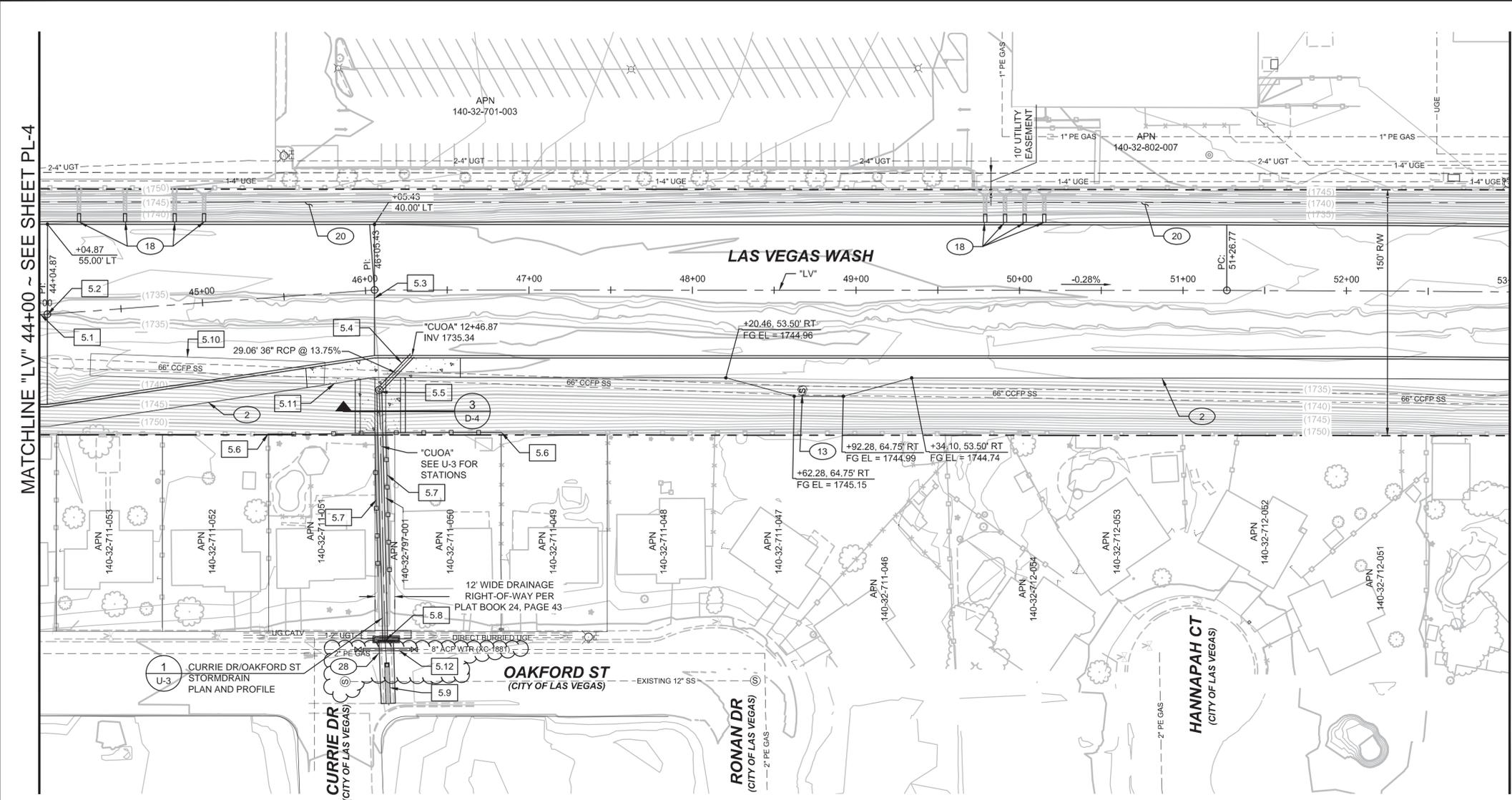


DESIGNED BY: S. ELIZONDO  
 DRAWN BY: S. ELIZONDO  
 CHECKED BY: D. BENDER  
 DATE: July 31, 2015

**Stanley Consultants inc.**  
 9820 SOUTH EASTERN AVENUE, SUITE 200  
 LAS VEGAS, NEVADA 89119 (702) 369-9396

SCALE  
 HORIZ: 1"=40'  
 VERT: 1"=2'  
 FIELD BOOK  
 WORK ORDER  
 PROJECT No. 24523

L-2031  
 DRAWING NO.  
**TY-15**  
 SHT: 27 OF 90



NOTE: CONTRACTOR IS ADVISED THAT THE EXISTING 66" DIAMETER SEWER IN THE LAS VEGAS WASH IS SHALLOW. SEE PROFILE ON PR SHEETS

**CONSTRUCTION NOTES**

- 2 CONSTRUCT 12' MAINTENANCE ROAD (SEE TYPICAL SECTION)
- 13 ADJUST EXISTING SS MANHOLE TO FINISHED GRADE PER DET 2/D-1
- 18 CONSTRUCT CONCRETE U CHANNEL, MATCH WIDTH OF EXISTING SIDEWALK UNDERDRAIN PER DET 6/D-1
- 20 16' MAINTENANCE ROAD, TRAIL & LIGHTING AREA. INSTALL TYPE II PER DETAIL 2.1/D-1. FOR FINISHED TRAIL GRADES, LIGHTING AND CONCRETE SECTION, SEE "LAS VEGAS WASH PEDESTRIAN BRIDGES AND PHASE 2 TRAIL
- 28 CONTRACTOR TO COORDINATE PROTECTION AND RELOCATION OF GAS LINES, INCLUDING LATERALS WITH SWG
- 5.1 "LV" 44+00.00 TO "LV" 44+04.87 CONSTRUCT 4.87 LF 110' WIDE RECTANGULAR CHANNEL (SEE PROFILE ON SHEET PR-5)
- 5.2 "LV" 44+04.87 TO "LV" 46+05.43 CONSTRUCT 200.56 LF TRANSITION FROM 110' WIDE RECTANGULAR CHANNEL TO 80' WIDE RECTANGULAR CHANNEL
- 5.3 "LV" 46+05.43 TO "LV" 53+00 CONSTRUCT 694.57 LF 80' WIDE RECTANGULAR CHANNEL (SEE PROFILE ON SHEET PR-5)
- 5.4 INSTALL 193.69 LF 36" RCP STORMDRAIN. (SEE PROFILE ON SHEET U-3)
- 5.5 "CUOA" 12+17.80 CONSTRUCT 60" TYPE II SDMH (SEE PROFILE ON SHEET U-3)
- 5.6 "LV" 45+37 TO "LV" 46+00 & "LV" 46+12 TO "LV" 46+84 CONSTRUCT RESIDENTIAL CMU SCREEN/RETAINING WALL
- 5.7 "CUOA" 10+74.32, 3.66' LT TO "CUOA" 11+91.67, 3.66' LT & "CUOA" 10+74.32, 3.66' RT TO "CUOA" 11+921.67, 3.66' RT CONSTRUCT FLOOD CHANNEL WITH RESIDENTIAL SCREEN/RETAINING WALL (SEE DETAIL ON SHEET SS-17)
- 5.8 "CUOA" 10+65.38 CONSTRUCT 15' TYPE DM DROP INLET (SEE PROFILE ON SHEET U-3)
- 5.9 "CUOA" 10+26.42 TO "CUOA" 10+50.42 CONSTRUCT TRENCH DRAIN PER SHEET D-3
- 5.10 "LV" 44+25 TO "LV" 45+72 CONSTRUCT SANITARY SEWER PROTECTION (SEE DETAIL ON SHEET SS-18)
- 5.11 "LV" 45+60.00, 46.00' RT TO "LV" 46+50.00, 46.00' RT CONSTRUCT REINFORCED CONCRETE MAINTENANCE ACCESS ROAD (SEE DETAIL 3/D-1)
- 5.12 "CUOA" 10+59.33 8" ACP WATER REPLACEMENT AND CASING PER SHEET D-3

**LVVWD NOTES:**

INSTALL WATERLINE IN STEEL CASING PER UDACS PLATES NO. 21 OR 22 AND 23. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF THE CASING. FROM THE UPPER BENDS THROUGH THE LOWERED SECTION OF THE PIPE, DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

ANNUAL SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH CLASS 1 CLSM. SEE UDACS PLATES 16, 17, 18, AND 19, FOR BEDDING AND BACKFILL REQUIREMENTS.

**FOR DRAINAGE CHANNEL PROFILE SEE SHEET PR-5**

APPROVED FOR CONSTRUCTION  
Las Vegas Valley Water District Engineering Services Manager  
Date \_\_\_\_\_ Project No. 123197

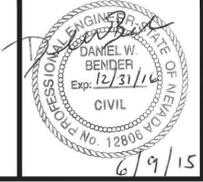


AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.  
**Call before you Dig**  
Call before you Overhead  
1-702-227-2929  
NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT  
FREIGHTWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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1	7/31/15	VALVES SHOWN	HM
REV No.	DATE	DESCRIPTION	APPROVED



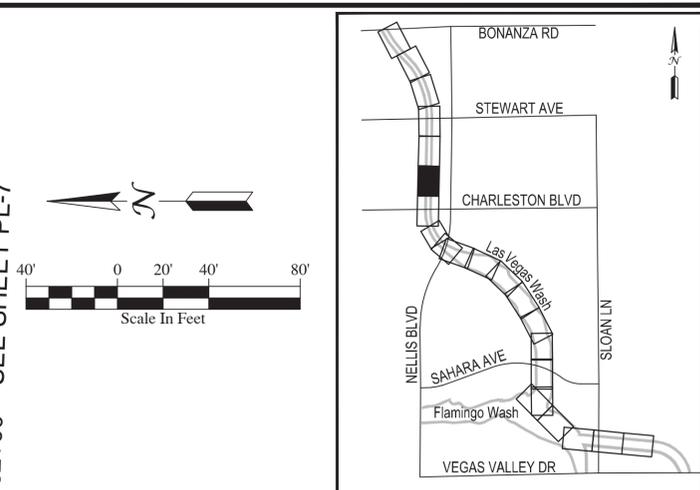
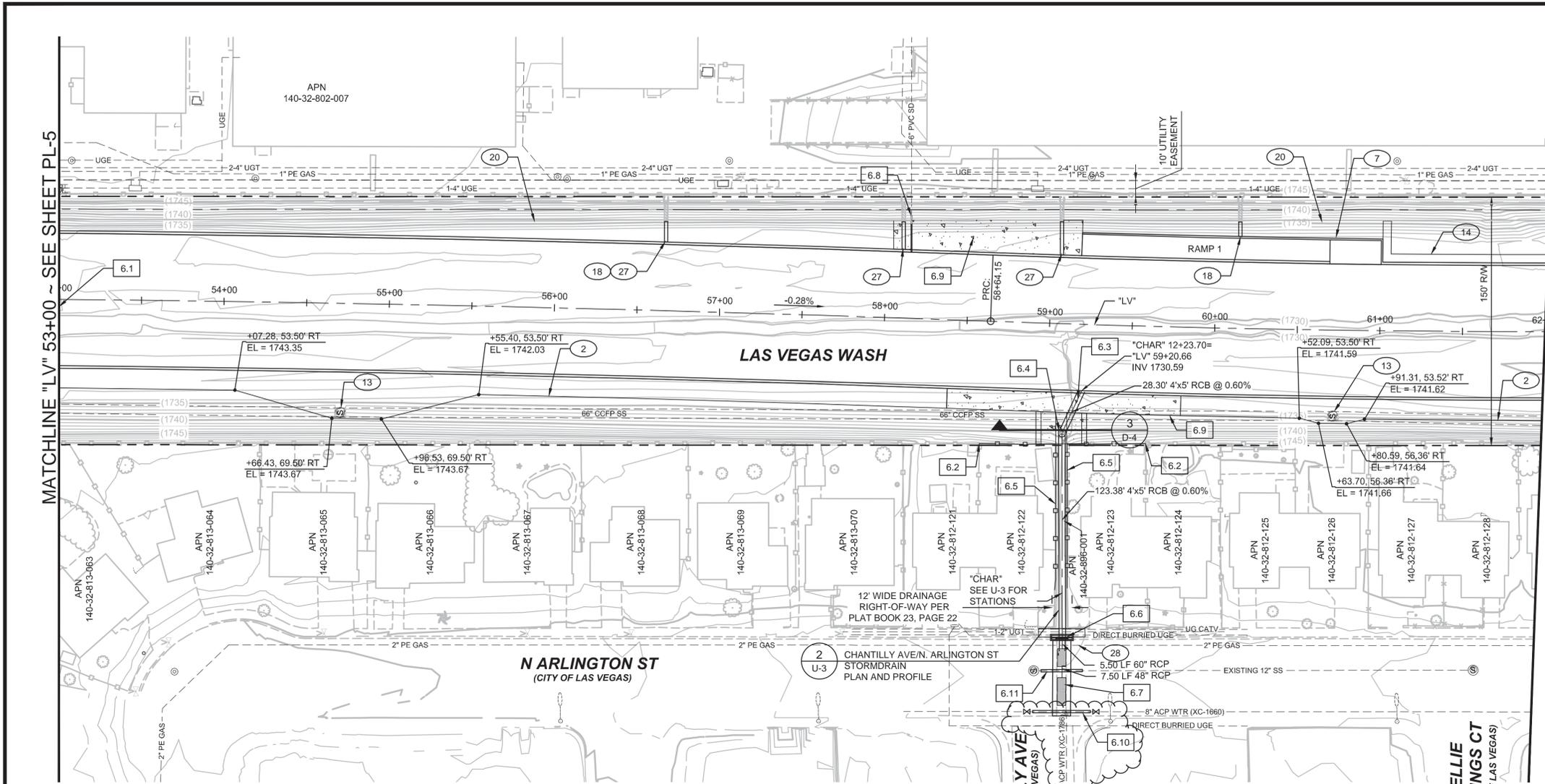
**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
CHANNEL PLAN  
"LV" 44+00 TO "LV" 53+00  
CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: H. MURVOSH  
DRAWN BY: S. ELIZONDO  
CHECKED BY: D. BENDER  
DATE: July 6, 2015

Stanley Consultants INC.  
9820 SOUTH EASTERN AVENUE, SUITE 200  
LAS VEGAS, NEVADA 89119 (702) 369-9396

SCALE	HORIZ: 1"=40'	VERT: NONE	FIELD BOOK	WORK ORDER	PROJECT No. 25423	SHT: 34 OF 90
<b>L-2031</b>		DRAWING NO.		<b>PL-5</b>		



NOTE: CONTRACTOR IS ADVISED THAT THE EXISTING 66" DIAMETER SEWER IN THE LAS VEGAS WASH IS SHALLOW. SEE PROFILE ON PR SHEETS

**CONSTRUCTION NOTES**

- 2 CONSTRUCT 12' MAINTENANCE ROAD (SEE TYPICAL SECTION)
- 7 CONSTRUCT ACCESS RAMP PER SHEET SS-12
- 13 ADJUST EXISTING SS MANHOLE TO FINISHED GRADE PER DET 2/D-1
- 14 CONSTRUCT 5' MANWAY (SEE TYPICAL SECTION)
- 18 CONSTRUCT CONCRETE U CHANNEL, MATCH WIDTH OF EXISTING SIDEWALK UNDERDRAIN PER DET 6/D-1
- 20 16' MAINTENANCE ROAD, TRAIL & LIGHTING AREA. INSTALL TYPE II PER DETAIL 2.1/D-1. FOR FINISHED TRAIL GRADES, LIGHTING AND CONCRETE SECTION, SEE "LAS VEGAS WASH PEDESTRIAN BRIDGES AND PHASE 2 TRAIL (BY OTHERS)
- 27 CONSTRUCT SIDEWALK UNDERDRAIN PER DET 6/D-4
- 28 CONTRACTOR TO COORDINATE PROTECTION AND RELOCATION OF GAS LINES, INCLUDING LATERALS WITH SWG

- 6.1 "LV" 53+00.00 TO "LV" 62+00.00 CONSTRUCT 900 LF 80" WIDE RECTANGULAR CHANNEL (SEE PROFILE ON SHEET PR-6)
- 6.2 "LV" 58+60 TO "LV" 59+06 & "LV" 59+13 TO "LV" 59+60 CONSTRUCT RESIDENTIAL CMU SCREEN/RETAINING WALL
- 6.3 "LV" 59+20.66, 45' RT CONSTRUCT 151.68 4'x5' RCB STORMDRAIN (SEE PROFILE ON SHEET U-3)
- 6.4 "CHAR" 11+95.40 CONSTRUCT 48" MANHOLE RISER (SEE PROFILE ON SHEET U-3)
- 6.5 "CHAR" 10+78.19, 3.66' LT TO "CHAR" 11+88.86, 3.66' LT & "CHAR" 10+77.59, 3.66' RT TO "CHAR" 11+88.86, 3.66' RT CONSTRUCT FLOOD CHANNEL WITH RESIDENTIAL CMU SCREEN/RETAINING WALL (SEE DETAIL SS-17)
- 6.6 "CHAR" 10+72.02 CONSTRUCT 12.5' TYPE DM DROP INLET AND 5.50 LF OF 60" RCP (SEE PROFILE ON SHEET U-3)
- 6.7 "CHAR" 10+31.30 TO "CHAR" 10+47.30 & "CHAR" 10+54.80 TO "CHAR" 10+64.80 CONSTRUCT TRENCH DRAIN AND 7.50 LF OF 48" RCP PER SHEET D-3 AND U-3
- 6.8 "LV" 58+14.17, 62.13' LT EXTEND EXISTING PVC SD WITH LIKE MATERIAL (6" DIA) SEE PR-6
- 6.9 "LV" 58+39.50, 41.50' RT TO "LV" 59+80.50, 41.50' RT & "LV" 58+11.12, 41.50' LT TO "LV" 59+19.15, 41.50' LT CONSTRUCT REINFORCED CONCRETE MAINTENANCE ACCESS ROAD (SEE DETAIL 3/D-1)
- 6.10 "CHAR" 10+27.20 8" ACP WATER REPLACEMENT PER SHEET D-3
- 6.11 "CUOA" 10+51.94 12" VCP SEWER REPLACEMENT PER SHEET D-3

**LVVWD NOTES:**

INSTALL WATERLINE IN STEEL CASING PER UDACS PLATES NO. 21 OR 22 AND 23. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF THE CASING. FROM THE UPPER BENDS THROUGH THE LOWERED SECTION OF THE PIPE. DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

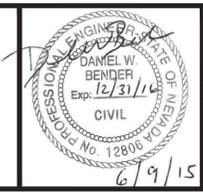
ANNULAR SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH CLASS 1 CLSM. SEE UDACS PLATES 16, 17, 18, AND 19, FOR BEDDING AND BACKFILL REQUIREMENTS.

**FOR DRAINAGE CHANNEL PROFILE SEE SHEET PR-6**

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REV No.	DATE	DESCRIPTION		APPROVED



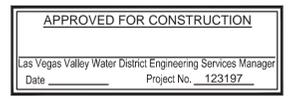
**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
**CHANNEL PLAN**  
 "LV" 53+00 TO "LV" 62+00  
 CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: H. MURVOSH  
 DRAWN BY: S. ELIZONDO  
 CHECKED BY: D. BENDER  
 DATE: July 6, 2015

**Stanley Consultants INC.**  
 9820 SOUTH EASTERN AVENUE, SUITE 200  
 LAS VEGAS, NEVADA 89119 (702) 369-9396

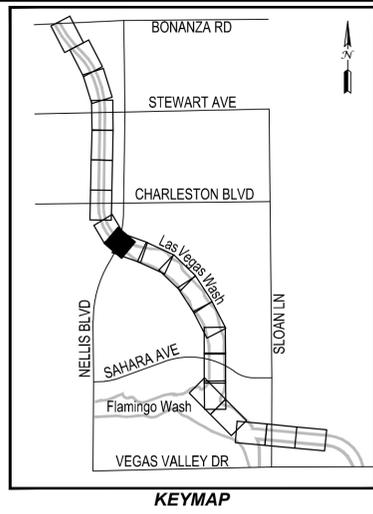
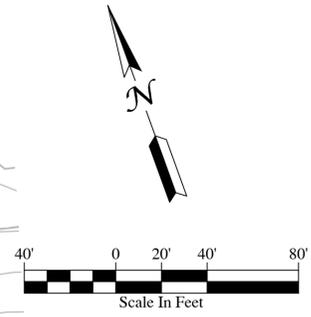
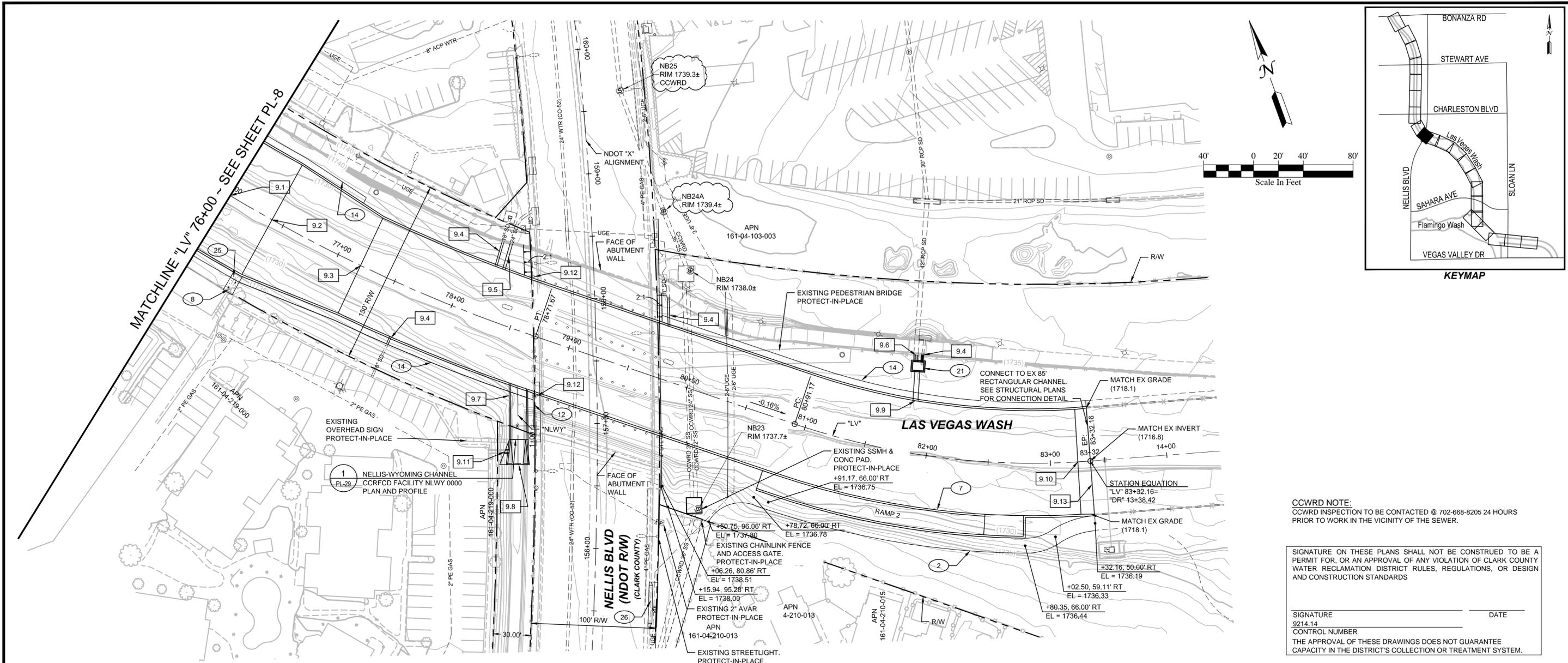
SCALE	HORIZ: 1"=40'	VERT: NONE	FIELD BOOK	WORK ORDER	PROJECT No. 25423	SHT: 35 OF 90
<b>L-2031</b>		DRAWING No.		<b>PL-6</b>		



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**Call before you Dig**  
**Overhead**  
 1-702-227-2929  
 NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT  
 FIREWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

R:\24523-LV Wash\11-CADD\Imp Plans\24523\_03\_PLAN AND PROFILE\20140203\_rectangular.dwg

LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS



CCWRD NOTE:  
CCWRD INSPECTION TO BE CONTACTED @ 702-668-8205 24 HOURS PRIOR TO WORK IN THE VICINITY OF THE SEWER.

SIGNATURE ON THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF ANY VIOLATION OF CLARK COUNTY WATER RECLAMATION DISTRICT RULES, REGULATIONS, OR DESIGN AND CONSTRUCTION STANDARDS

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 9214.14  
 CONTROL NUMBER  
 THE APPROVAL OF THESE DRAWINGS DOES NOT GUARANTEE CAPACITY IN THE DISTRICT'S COLLECTION OR TREATMENT SYSTEM.

**CONSTRUCTION NOTES**

- 2 CONSTRUCT 12' MAINTENANCE ROAD (SEE TYPICAL SECTION)
- 7 CONSTRUCT ACCESS RAMP PER SHEET SS-12
- 8 CONSTRUCT 8' WIDE CONCRETE SWALE PER DET 5/D-1
- 12 "NDOT" 156+97.1, 50' LT TO "NDOT" 157+25.4, 50.3' LT CONSTRUCT 3.7' TALL CONCRETE RETAINING WALL. MODIFY SIDEWALK AND BARRIER RAIL. SEE SHEET SS-32
- 14 CONSTRUCT 5' MANWAY (SEE TYPICAL SECTION)
- 21 CONSTRUCT STORMDRAIN JUNCTION STRUCTURE PER SHEET U-1 & SS-21
- 25 CONSTRUCT 5' REINFORCED CONCRETE MANWAY PER DET 3/D-1
- 26 CONSTRUCT CONCRETE DRIVEWAY PER DET 4/D-4
- 9.1 "LV" 76+00.00 TO "LV" 76+40.00 CONSTRUCT 40.00 LF 100' WIDE RECTANGULAR CHANNEL (SEE PROFILE ON SHEET PR-9)
- 9.2 "LV" 76+40.00 TO "LV" 77+20.00 CONSTRUCT 80 LF TRANSITION FROM 100' WIDE RECTANGULAR CHANNEL TO 84' WIDE RECTANGULAR CHANNEL PER SHEET PR-9
- 9.3 "LV" 77+20.00 TO "LV" 83+22.16 CONSTRUCT 602.16 LF 84' WIDE RECTANGULAR CHANNEL (SEE PROFILE ON SHEET PR-9)
- 9.4 "LV" 77+64.64, 47.88' RT "LV" 78+21.87, 62.47' LT "LV" 79+70.69, 63.28' LT "LV" 81+84.10, 79.06' LT EXTEND 18' RCP SD (SEE PROFILE ON SHEET U-1 & U-5) (SEE DETAILS ON SHEET SS-6)
- 9.5 "LV" 78+28.99, 63.46' LT EXTEND EXISTING 24" RCP (SEE PROFILE ON SHEET U-5 & SEE DETAILS ON SHEET SS-6)
- 9.6 "LV" 81+77.07 77.83' LT EXTEND EXISTING 42" RCP (SEE PROFILE ON SHEET U-1 & SEE DETAILS ON SHEET SS-6)
- 9.7 "NLWY" 1+00.00 TO "NLWY" 1+42.30 CONSTRUCT 12X7' RCB (SEE PROFILE ON SHEET PL-29) (SEE SS-14)
- 9.8 "NLWY" 0+80.00 TO "NLWY" 1+00.00 CONSTRUCT TRANSITION FROM TRAPEZOIDAL CHANNEL TO 12X7' RCB (SEE PROFILE ON SHEET PL-29)
- 9.9 "LV" 81+84.10, 42' LT 48" RCP (SEE PROFILE ON SHEET U-1)
- 9.10 "LV" 83+22.16 TO "LV" 83+32.16 CONSTRUCT 10 LF TRANSITION FROM 84' WIDE RECTANGULAR CHANNEL TO 85' WIDE RECTANGULAR CHANNEL PER SHEET PR-9
- 9.11 "NLWY" 0+90.50, 11.12' LT CONNECT EXISTING U CHANNEL TO CONCRETE CHANNEL PER DET 6/D-1
- 9.12 "LV" 78+53.55 TO "LV" 79+58.26, 45' LT & "LV" 78+86.72 TO "LV" 79+90.66, 45' RT CONSTRUCT ISOLATION CASING (24 CIRCULAR COLUMNS)
- 9.13 EXPANSION JOINT PER SHEET SS-1. MATCH EXISTING GROUND

**FOR DRAINAGE CHANNEL PROFILE SEE SHEET PR-9**

APPROVED FOR CONSTRUCTION  
 Las Vegas Valley Water District Engineering Services Manager  
 Date \_\_\_\_\_ Project No. 123197

**FAST**  
 Call before you Dig  
 UnderGround  
 1-702-432-5300  
 NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT  
 SYSTEM OF TRANSPORTATION

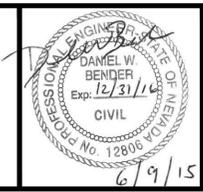
AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.  
 Call before you Dig  
**Overhead**  
 1-702-227-2929  
 NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

Call before you Dig  
 AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.  
**811**

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1	7/31/15	UPDATE LABELS	HM
REV NO.	DATE	DESCRIPTION	APPROVED



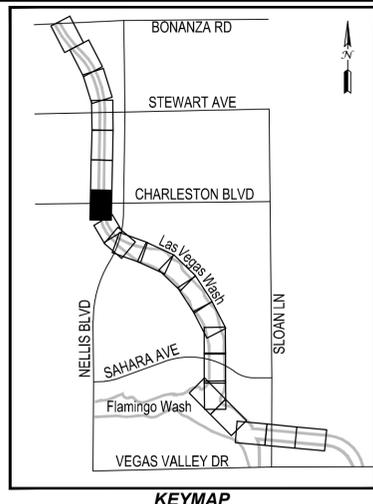
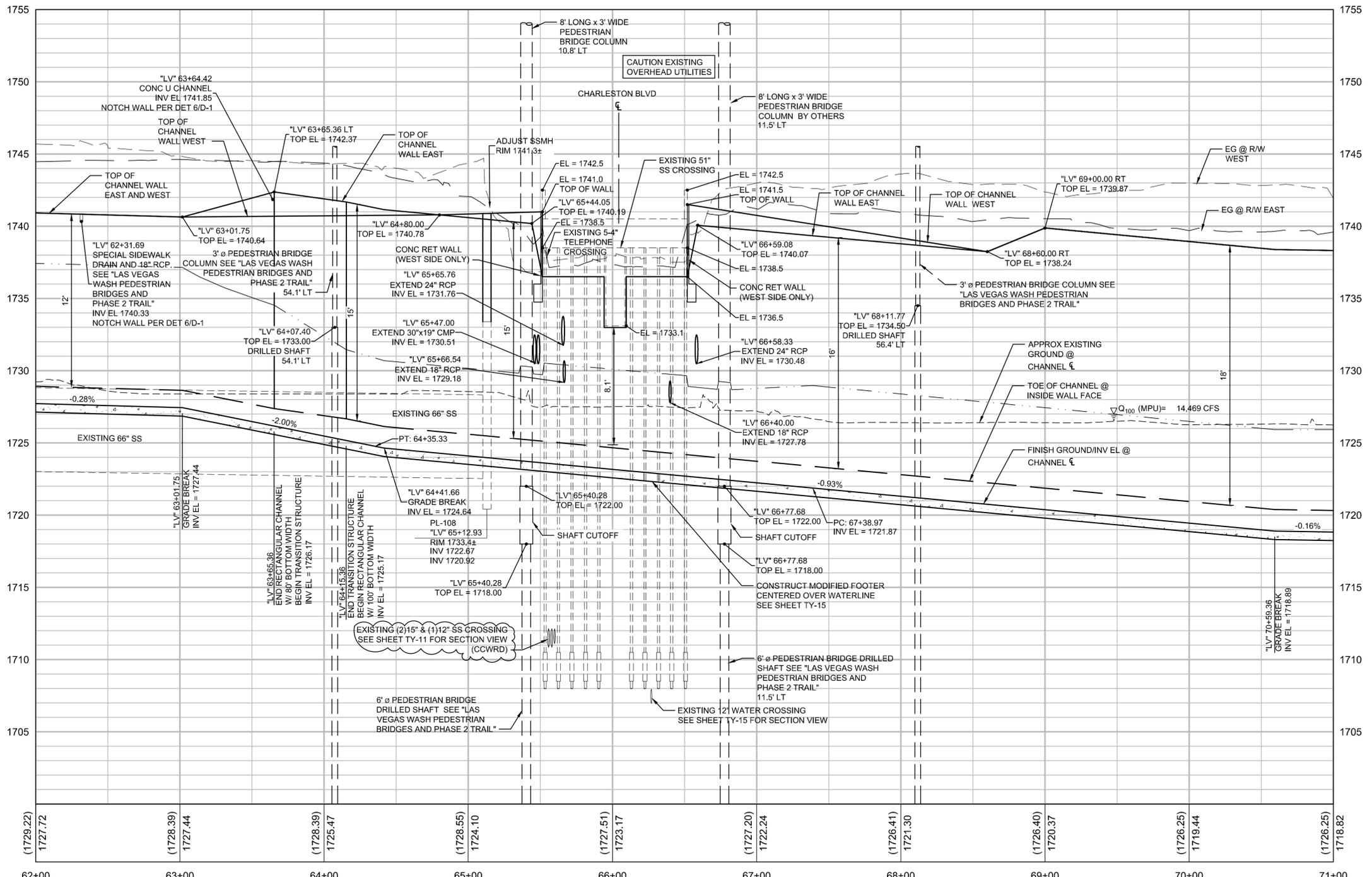
**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
 CHANNEL PLAN  
 "LV" 76+00 TO "LV" 83+32.16  
 CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: H. MURVOSH  
 DRAWN BY: S. ELIZONDO  
 CHECKED BY: D. BENDER  
 DATE: July 31, 2015

**Stanley Consultants INC.**  
 9820 SOUTH EASTERN AVENUE, SUITE 200  
 LAS VEGAS, NEVADA 89119 (702) 369-9396  
 A Stanley Group Company: Engineering, Environmental Sciences, and Construction Services Worldwide

SCALE	HORIZ: 1"=40'	L-2031
VERT: NONE	FIELD BOOK	DRAWING NO.
WORK ORDER	<b>PL-9</b>	
PROJECT No. 24523	SHT: 38 OF 90	



FOR FINISHED TRAIL GRADES, LIGHTING AND CONCRETE SECTION, SEE "LAS VEGAS WASH PEDESTRIAN BRIDGES AND PHASE 2 TRAIL" (TRAIL PLAN)

CCWRD NOTE:  
CCWRD INSPECTION TO BE CONTACTED @ 702-668-8205 24 HOURS PRIOR TO WORK IN THE VICINITY OF THE SEWER.

SIGNATURE ON THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF ANY VIOLATION OF CLARK COUNTY WATER RECLAMATION DISTRICT RULES, REGULATIONS, OR DESIGN AND CONSTRUCTION STANDARDS

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
9214.14  
CONTROL NUMBER  
THE APPROVAL OF THESE DRAWINGS DOES NOT GUARANTEE CAPACITY IN THE DISTRICT'S COLLECTION OR TREATMENT SYSTEM.

APPROVED FOR CONSTRUCTION  
Las Vegas Valley Water District Engineering Services Manager  
Date \_\_\_\_\_ Project No. 123197

FOR DRAINAGE CHANNEL PLAN SEE SHEET PL-7



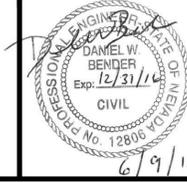
AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.  
Call before you Dig  
Overhead  
1-702-227-2929  
NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT  
SYSTEM OF TRANSPORTATION



REV NO.	DATE	DESCRIPTION	APPROVED
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1	7/31/15	INCLUDE CCWRD IN LABEL	HM



**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
CHANNEL PROFILE  
"LV" 62+00 TO "LV" 71+00  
CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



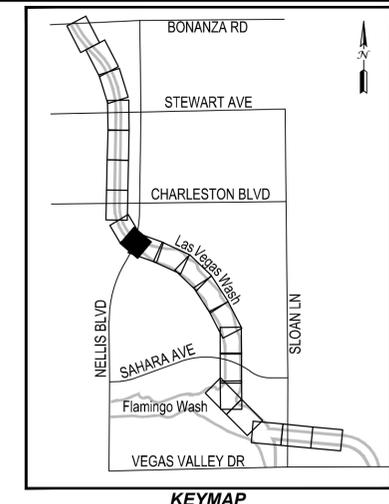
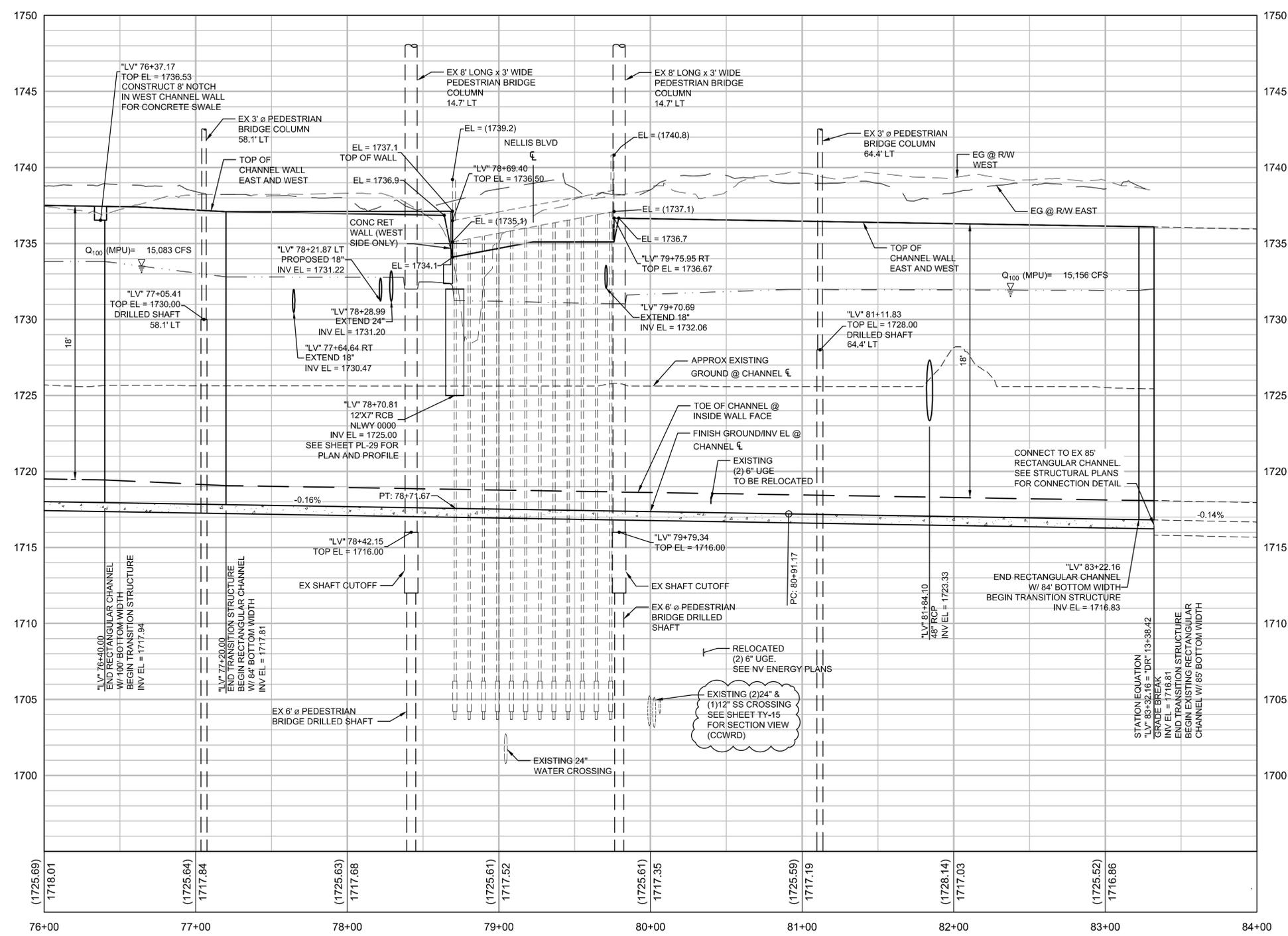
DESIGNED BY: H.MURVOSH  
DRAWN BY: S. ELIZONDO  
CHECKED BY: D. BENDER  
DATE: July 31, 2015  
Stanley Consultants INC.  
3820 SOUTH EASTERN AVENUE, SUITE 200  
LAS VEGAS, NEVADA 89119 (702) 369-9396  
A Stanley Group Company: Engineering, Environmental Sciences, and Construction Services Worldwide

SCALE  
HORIZ: 1"=40'  
VERT: 1"=4'  
FIELD BOOK  
WORK ORDER  
PROJECT No. 24523

L-2031  
DRAWING NO.  
**PR-7**  
SHT: 44 OF 90

LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS

LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS



CCWRD NOTE:  
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SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
9214.14  
CONTROL NUMBER  
THE APPROVAL OF THESE DRAWINGS DOES NOT GUARANTEE CAPACITY IN THE DISTRICT'S COLLECTION OR TREATMENT SYSTEM.

APPROVED FOR CONSTRUCTION  
Las Vegas Valley Water District Engineering Services Manager  
Date \_\_\_\_\_ Project No. 123197

FOR DRAINAGE CHANNEL PLAN  
SEE SHEET PL-9

**FAST**  
Call before you Dig  
UnderGround  
1-702-432-5300  
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

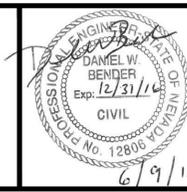
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Overhead  
1-702-227-2929  
AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.

Call before you Dig  
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AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

REV NO.	DATE	DESCRIPTION	APPROVED
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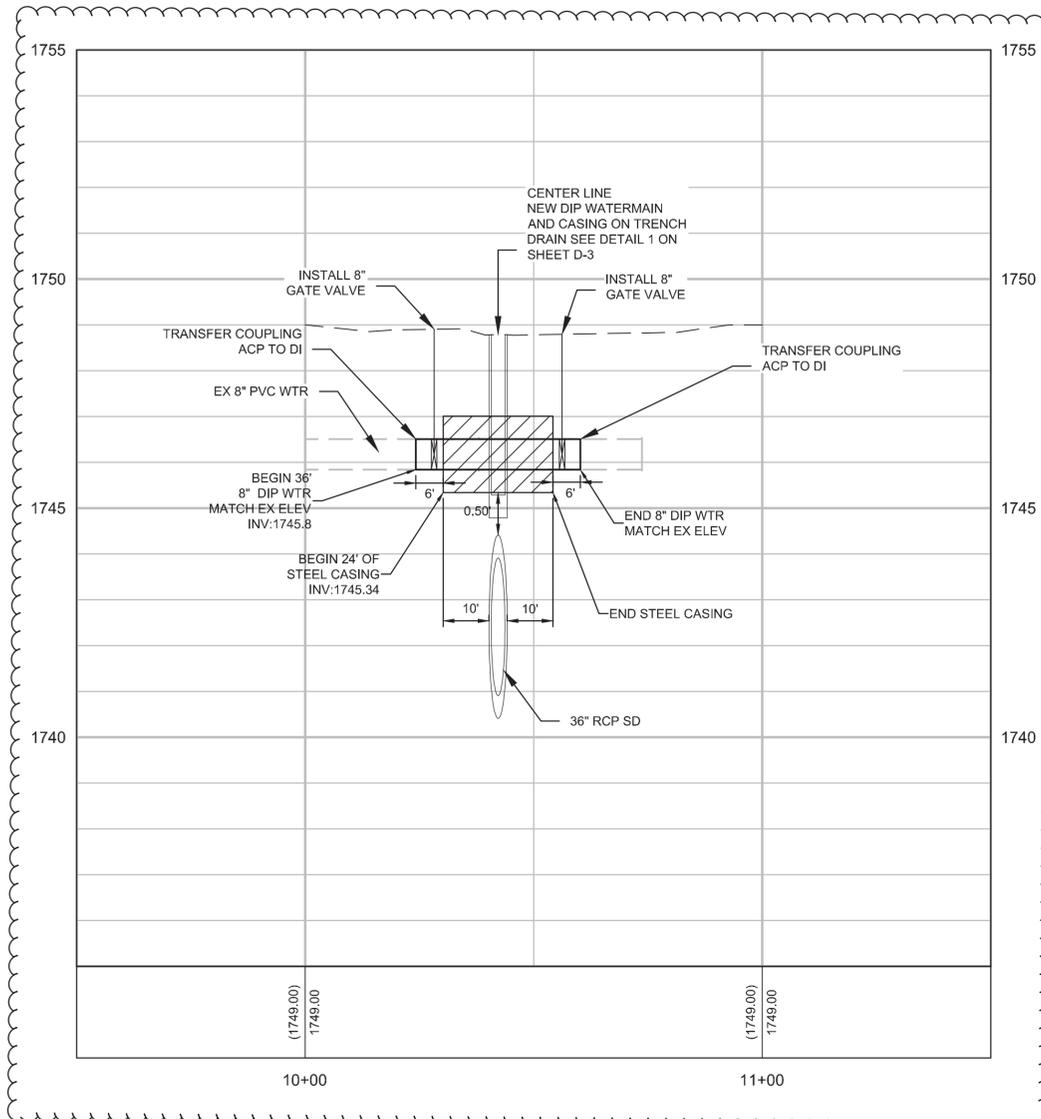
**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
CHANNEL PROFILE  
"LV" 76+00 TO "LV" 83+32.16  
CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: H. MURVOSH  
DRAWN BY: S. ELIZONDO  
CHECKED BY: D. BENDER  
DATE: July 31, 2015  
Stanley Consultants INC.  
3820 SOUTH EASTERN AVENUE, SUITE 200  
LAS VEGAS, NEVADA 89119 (702) 369-9396

SCALE  
HORIZ: 1"=40'  
VERT: 1"=4'  
FIELD BOOK  
WORK ORDER  
PROJECT No. 24523

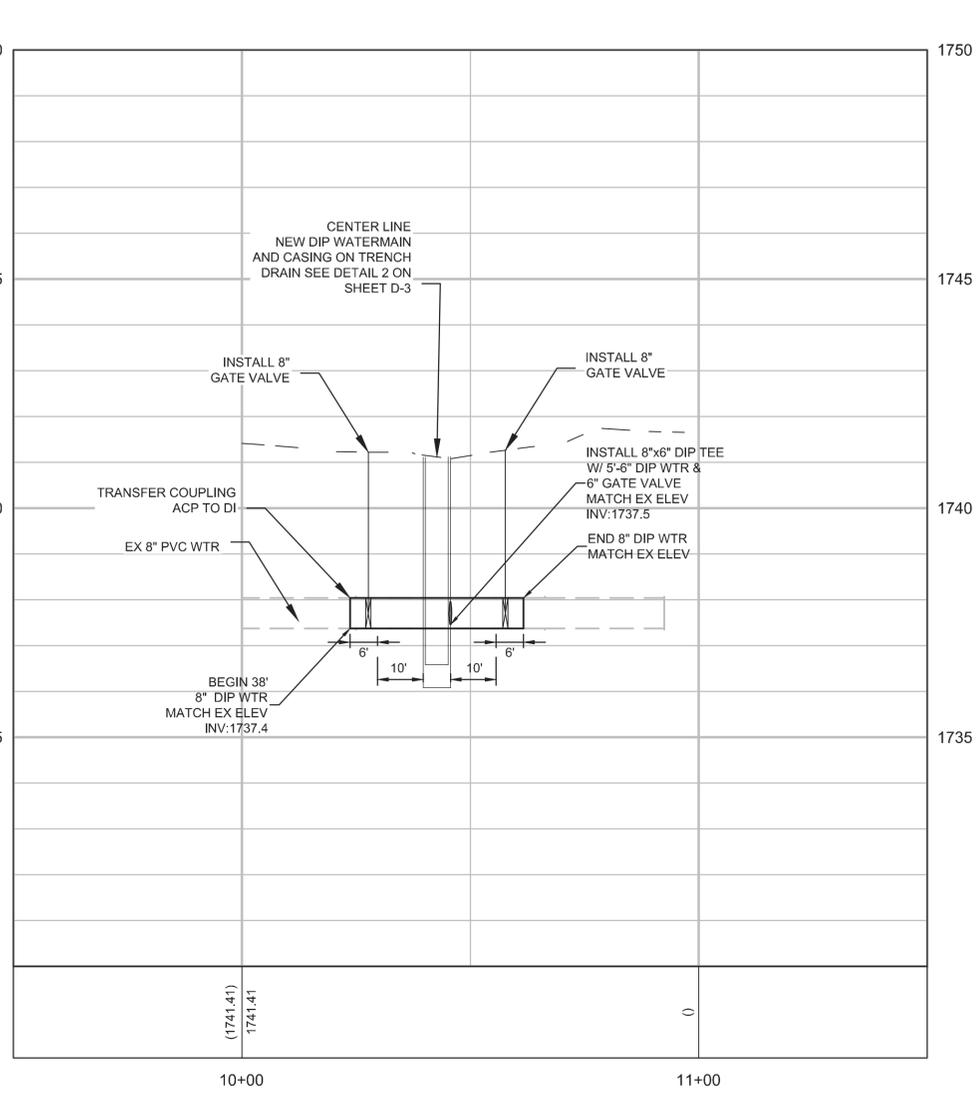
L-2031  
DRAWING NO.  
**PR-9**  
SHT: 46 OF 90



"CUOA WATER RELOCATION" PROFILE

SCALE: HORIZ 1"=20', VERT 1"=2'

1



"CHAR WATER RELOCATION" PROFILE

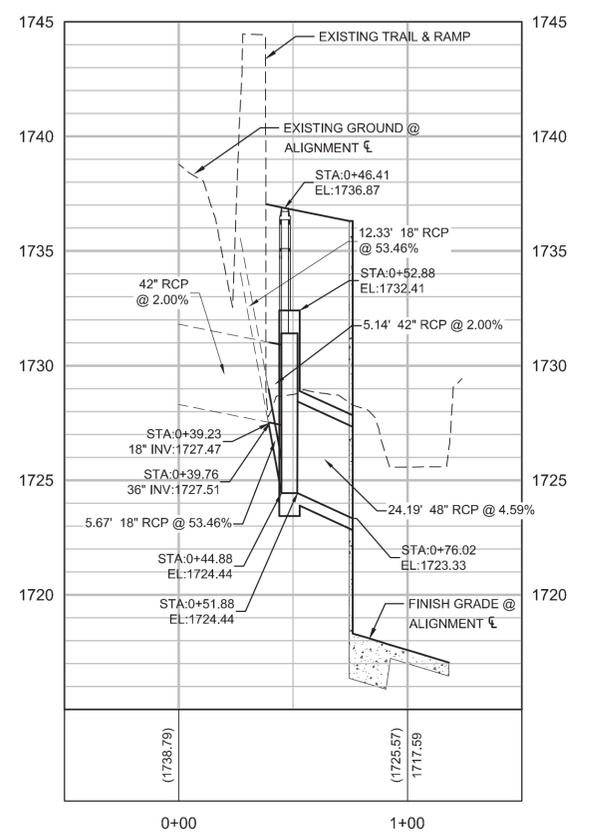
SCALE: HORIZ 1"=20', VERT 1"=2'

3

- NOTES:
- MATCH EXISTING LVVWD PIPE ELEVATIONS WITH NEW DUCTILE IRON PIPE.
  - PIPE TO BE LEVEL WITH NO HORIZONTAL OR VERTICAL BENDS.
  - INSTALL WATERLINE IN STEEL CASING PER UDACS PLATE NO. 23
  - DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED.
  - ANNULAR SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH FINE SAND OR CONTROLLED LOW STRENGTH MATERIAL (CLSM 50 PSI - 75 PSI)
  - SEE UDACS PLATES 17 & 19 FOR BEDDING AND BACKFILL REQUIREMENTS.
  - SEE D-3 FOR PLAN VIEW
  - COORDINATE INSPECTIONONS AND ANY INTERRUPTION IN SERVICE WITH LVVWD PER SECTION 629 OF THESE SPECIAL PROVISIONS AND UDACS SECTION 3.14.01 (LATEST EDITION)
  - EXISTING WATER MAIN LOCATION SHOWN ON PLAN IS APPROXIMATE. CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.
  - INSTALL PRODUCTS FROM LVVWD APPROVED PRODUCTS LIST AND PER SECTION 629 OF THE PROJECT SPECIAL PROVISIONS AND UDACS (LATEST EDITION)

APPROVED FOR CONSTRUCTION  
Las Vegas Valley Water District Engineering Services Manager  
Date \_\_\_\_\_ Project No. 123197

- NOTES:
- JUNCTION STRUCTURE PER SHEET SS-21
  - FOR CULVERT EXTENSION AND WALL PENETRATION, SEE SS-6
  - PIPE EXCAVATION LIMITS AND BACKFILL, SEE SECTIONS 1 AND 2, SHEET TE-4.

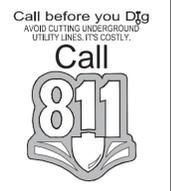


JUNCTION STRUCTURE @ 81+84.10, LT

2



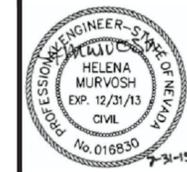
AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY.  
Call before you Dig  
Call before you Overhead  
1-702-227-2929  
NV ENERGY ENVIRONMENT AND SAFETY SERVICES DEPARTMENT  
FREWAY AND ARTERIAL SYSTEM OF TRANSPORTATION



REV No.	DATE	DESCRIPTION	APPROVED
1	7/31/15	REVISED NOTES, ADDED HATCH	HM



**LAS VEGAS WASH - NELLIS BLVD TO STEWART AVE IMPROVEMENTS**  
WATER RELOCATION PROFILES  
AND JUNCTION STRUCTURE PROFILE  
CLARK COUNTY, NEVADA DEPARTMENT OF PUBLIC WORKS



DESIGNED BY: H. MURVOSH  
DRAWN BY: S. ELIZONDO  
CHECKED BY: D. BENDER  
DATE: July 6, 2015

SCALE  
HORIZ: 1"=40'  
VERT: 1"=4'

Stanley Consultants INC.  
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L-2031  
DRAWING NO.  
**U-1**

PROJECT No. 24523  
SHT: 47 OF 90