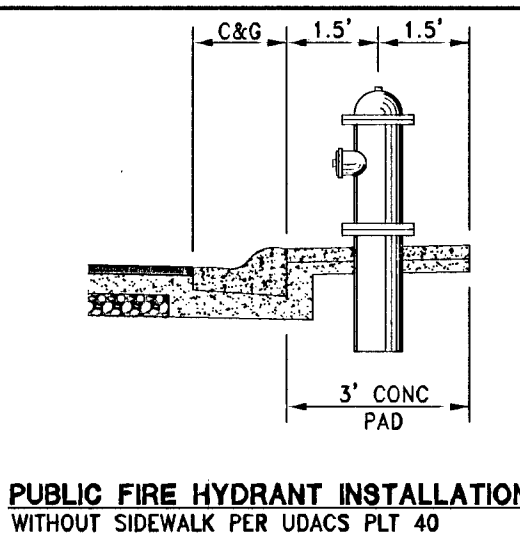


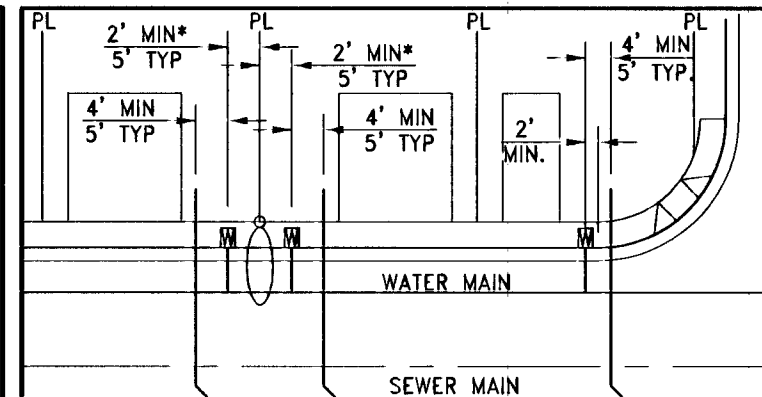
DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. CONTRACTOR TO NOTIFY ENGINEER OF ANY CHANGES OR DISCREPANCIES.

Avoid overhead power line contact. If contact is costly, call before you dig. Call before you dig. Nevada Power Environment and Safety Services Department. 1-702-227-2929. 1-800-227-2600. CLARK COUNTY PUBLIC OPERATIONS 1-702-455-7544



PUBLIC FIRE HYDRANT INSTALLATION
WITHOUT SIDEWALK PER UDACS PLT 40



TYPICAL WATER AND SEWER LATERAL LOCATIONS
MINIMUM SEPARATION OF 5 FEET REQUIRED FROM STREET LIGHT CENTER TO WATER METER BOX CENTER

REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) T

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY SHALL BE INSTALLED PER UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT TO ALLOW THE DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENT SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

WATER CONSTRUCTION NOTES

- 1. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE No. 40 (INCLUDES 8" GATE VALVE).
- 2. REMOVE EXISTING 8" CAP AND 2" BLOWOFF AND CONNECT TO EXISTING 8" WATER MAIN.
- 3. INSTALL 8" GATE VALVE PER UDACS PLATE No. 30 & No. 39.
- 4. INSTALL 8" X 6" TEE PER UDACS PLATE No. 31.
- 5. INSTALL 8" X 8" TEE PER UDACS PLATE No. 31.
- 6. INSTALL 8" X 6" REDUCER PER UDACS PLATE No. 30.
- 7. INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE No. 36.
- 8. INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE No. 2.
- 9. INSTALL 8" 5' BEND PER UDACS PLATE No. 31.
- 10. INSTALL 8" 11.25' BEND PER UDACS PLATE No. 31.
- 11. INSTALL 6" 11.25' BEND PER UDACS PLATE No. 31.
- 12. INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE No. 36.
- 13. INSTALL 8" 45' VERTICAL BEND PER UDACS PLATE No. 22.
- 14. INSTALL STEEL CASING PER UDACS PLATE No. 23.
- 15. INSTALL WATERLINE IN EASEMENT PER DETAIL 1 ON SHEET U-1.

SERVICE LATERALS

SERVICE LATERALS TO LOTS: 162 WILL BE TAPPED ON EXISTING MAIN BY OWNERS CONTRACTOR UNDER DIRECTION OF THE LVVWD.

SEWER CONSTRUCTION NOTES

- 21. INSTALL 48" STANDARD MANHOLE (PER DCSWS STD. No. SD-1A, SD-4, SD-5 & SD-6).
- 22. INSTALL 4" SEWER LATERAL (PER DCSWS STD No. SD-17, SD-22 & SD-23) AND 1 CU-FIT THRUST BLOCK @ CAP.
- 23. TYPICAL LOCATION FOR SEWER LATERAL AT WATER MAIN CROSSING. ALL SEWER LATERALS MUST MAINTAIN 24" VERTICAL CLEARANCE BELOW WATER MAIN AT CROSSINGS.
- 24. REFORM MANHOLE BASE TO PROVIDE SMOOTH FLOW.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 24NNW6
RIVET & PLATE CONCRETE PAD (ELECTRIC) 200' +/- SW OF P.I. OF ELKHORN RD & SCHAMBER RD (LANSFORD ST)
ELEVATION = 914.637 METERS (2008 ADJUSTMENT)
ELEVATION = 3000.77 U.S. SURVEY FEET (2008 ADJUSTMENT)

BASIS OF BEARINGS

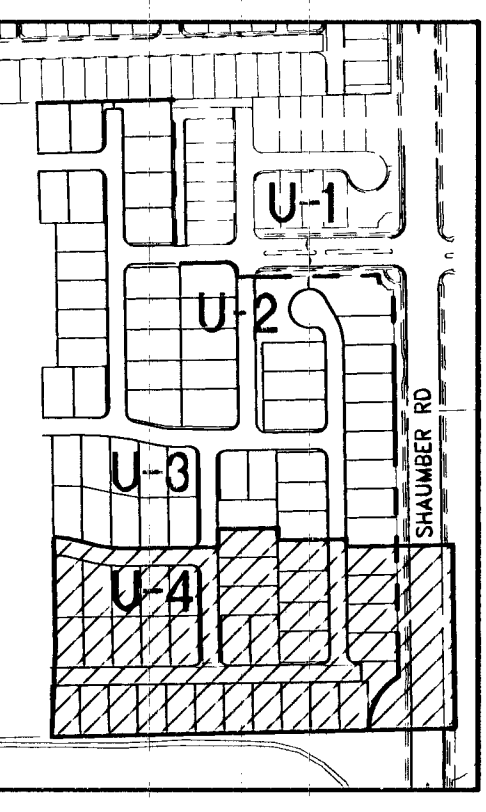
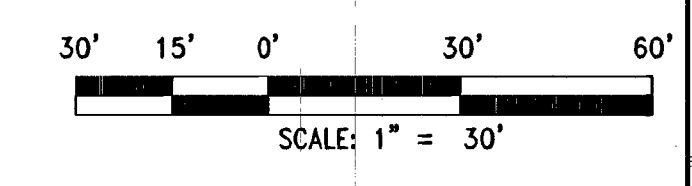
NORTH 00°45'00" EAST BEING THE BEARING OF THE EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 58 EAST, W.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

BACKWATER VALVE

ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE

PRESSURE REDUCING VALVE

ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE



KEY MAP

Table with columns: DATE, BY, APPR, DESCRIPTION, REVISION, and a list of revision details.

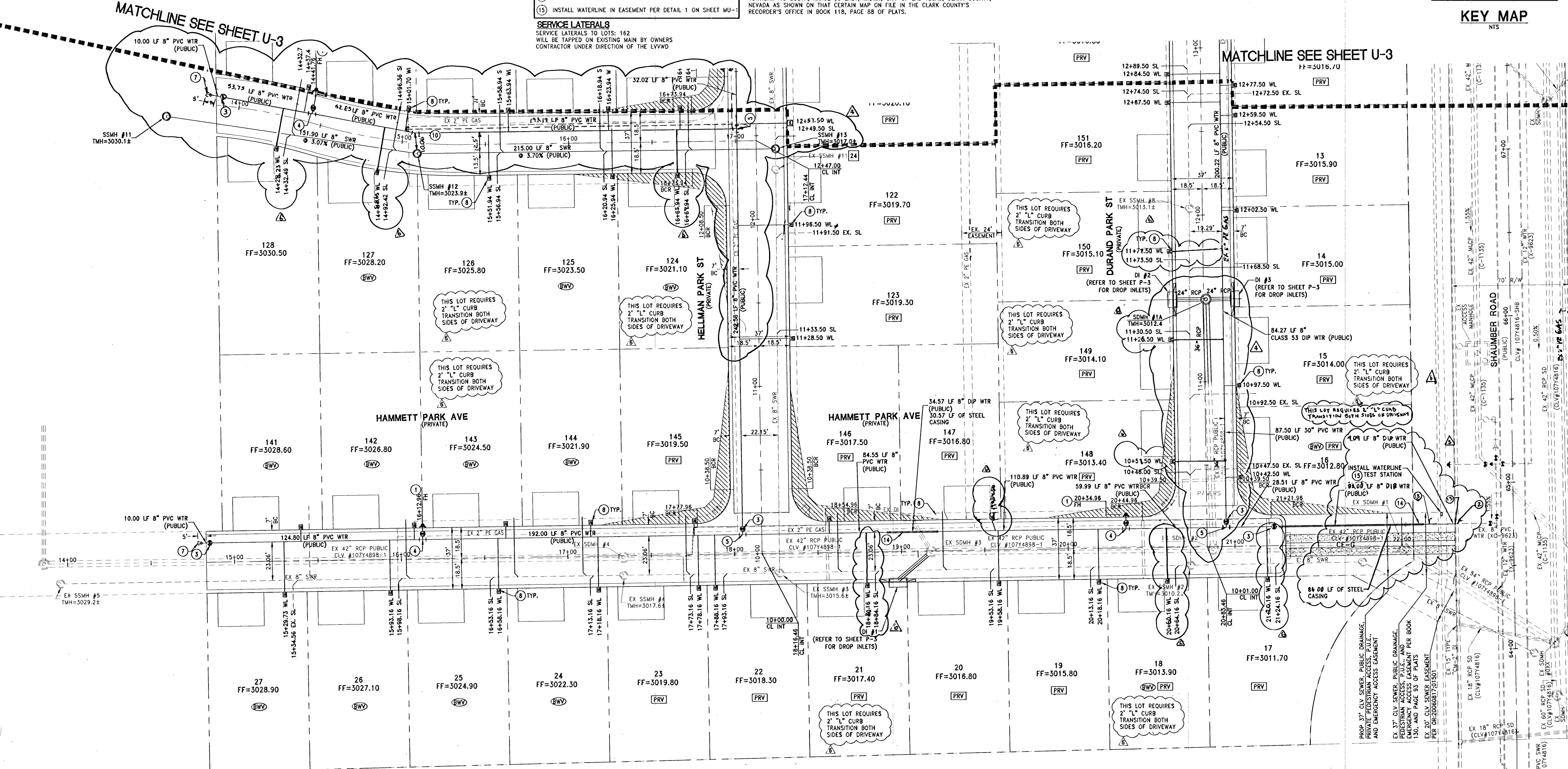
DATE: FEBRUARY 05, 2014
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=5'
DRAWN BY: JLS
DESIGNED BY: JLS
CHECKED BY: JLS
APPROVED BY: JLS
PROJECT #: 3110.0003

TOLL NORTH, LLC
1140 TOWN CENTER DRIVE SUITE 250
LAS VEGAS, NV 89144
PHONE: 702-243-9800 FAX: 702-243-9810
RCI Engineering
5325 S. HIGHLAND DRIVE SUITE 200, LAS VEGAS, NV 89109
PH: 702-243-9800 FAX: 702-243-9810

IMPROVEMENT PLANS FOR
FRANKLIN PARK PHASE 2A
A SINGLE FAMILY RESIDENTIAL SUBDIVISION
UTILITY PLAN (SHEET 4 OF 4)

CITY OF LAS VEGAS
PROFESSIONAL ENGINEER
JOHN I. LAND
Exp. 12/31/2015
CIVIL
NO. 16441

APPROVED FOR CONSTRUCTION
DATE: 02/12/14
PROJECT: 122409
LVVWD APPROVED FIRE FLOW 1,250 GPM AT 20 PSI RESIDUAL
DRAWING
U-4
SHT 16 OF 38
4452031
07/14/2014
CLV DRAWING



WATER NOTE
LOTS: 1-3, 5-23, 121-123, 145-155
THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRIVATE ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

WATER MAIN JOINT DEFLECTION (PVC 4"-24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1:150 FEET, PER UDACS 2.07.01 AND 2.07.02
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
NOTE:
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15

EXISTING UTILITY NOTE
1. EXISTING UTILITIES AS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY BOTH VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ENGINEER ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN INCORRECTLY OR OTHERWISE NOT SHOWN.

UTILITY LATERAL NOTE
WATER AND SEWER LATERAL STATIONS SHOWN ON THIS PLAN SET ARE CALCULATED AT THE BACK OF CURB

WASTEWATER FLOW CALCULATION
CALCULATIONS:
87 ERU (87 LOTS) * 250 GPD = 0.0218 MGD
= 0.0218 * 3.5 = 0.0763 MGD PEAK

BUILDING INFORMATION
TYPE OF CONSTRUCTION: Y-B
TOTAL LIVING AREA: < 4,800 S.F.
TOTAL S.F. UNDER ROOF: < 4,800 S.F.
NUMBER OF STORIES: 2
BUILDING USE: SINGLE FAMILY RESIDENTIAL
SPRINKLERED: NO
NUMBER OF FIRE HYDRANTS: 9
FIRE FLOW: 1,250 GPM AT 20 PSI RESIDUAL

CITY OF LAS VEGAS FIRE DEPARTMENT APPROVAL
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR OR ANY APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.
APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVVWD.
FIRE FLOW 1,250 GPM AT 20 PSI RESIDUAL

03/31/10 Toll North, LLC, Franklin Park Phase 2A, Utility Plan Sheet 4 of 4, 7/26/14