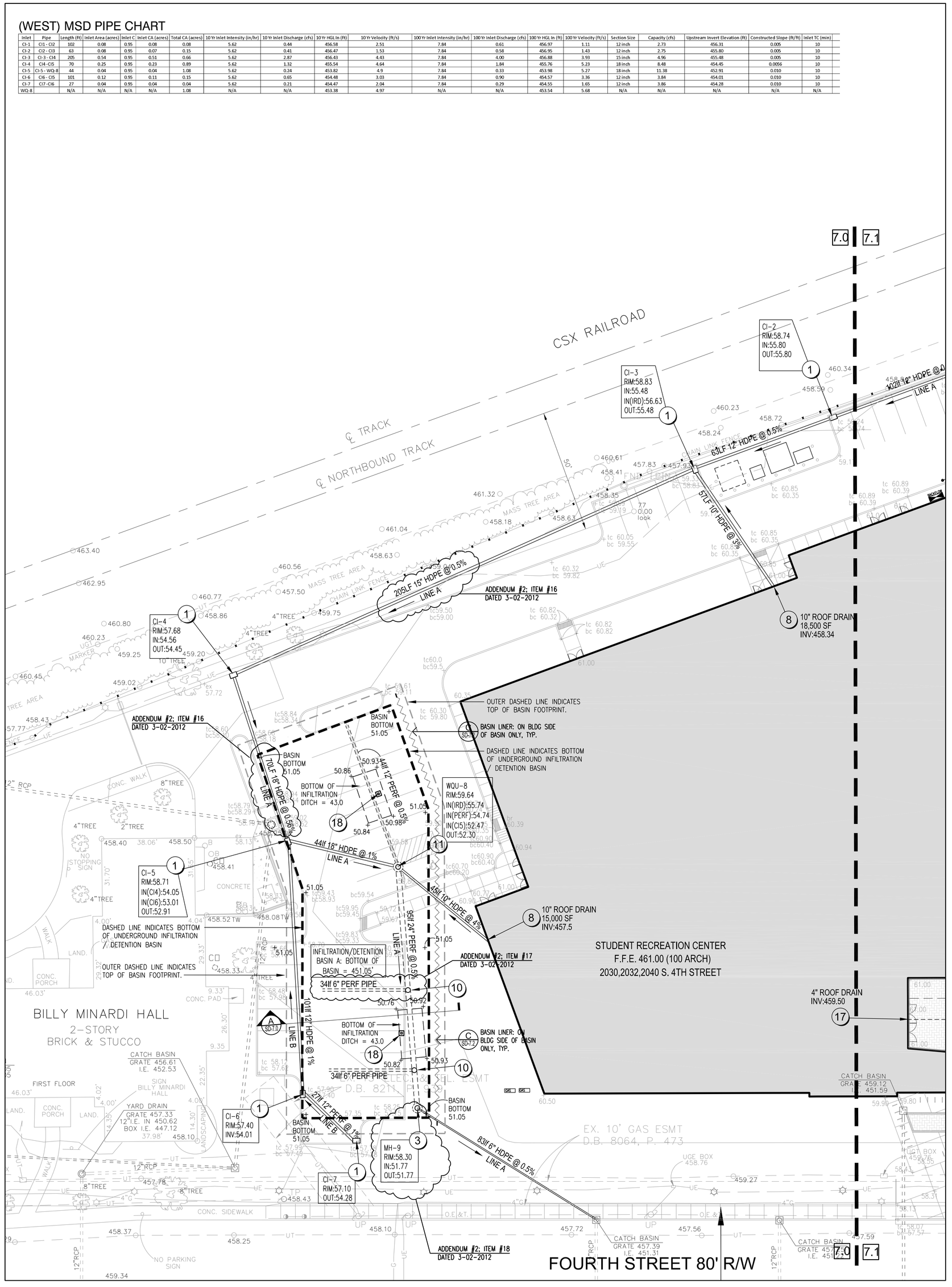
## (WEST) MSD PIPE CHART

| Inlet | Pipe | Length (ft) | Inlet Area (acres) | Inlet C | Inlet CA (acres) | Total CA (acres) | 10 Yr Inlet Intensity (in/hr) | 10 Yr Inlet Discharge (cfs) | 10 Yr HGL In (ft) | 10 Yr Velocity (ft/s) | 100 Yr Inlet Intensity (in/hr) | 100 Yr Inlet Discharge (cfs) | 100 Yr HGL In (ft) | 100 Yr Velocity (ft/s) | Section Size | Capacity (cfs) | Upstream Invert Elevation (ft) | Constructed Slope (ft/ft) | Inlet TC (min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CI-1 | CI1 - CI2 | 102 | 0.08 | 0.95 | 0.08 | 0.08 | 5.62 | 0.44 | 456.58 | 2.51 | 7.84 | 0.61 | 456.97 | 1.11 | 12 inch | 2.73 | 456.31 | 0.005 | 10 |
| CI-2 | CI2 - CI3 | 63 | 0.08 | 0.95 | 0.07 | 0.15 | 5.62 | 0.41 | 456.47 | 1.53 | 7.84 | 0.58 | 456.95 | 1.43 | 12 inch | 2.75 | 455.80 | 0.005 | 10 |
| CI-3 | CI-3 - CI4 | 205 | 0.54 | 0.95 | 0.51 | 0.66 | 5.62 | 2.87 | 456.43 | 4.43 | 7.84 | 4.00 | 456.88 | 3.93 | 15 inch | 4.96 | 455.48 | 0.005 | 10 |
| CI-4 | CI4-CI5 | 70 | 0.25 | 0.95 | 0.23 | 0.89 | 5.62 | 1.32 | 455.54 | 4.64 | 7.84 | 1.84 | 455.76 | 5.23 | 18 inch | 8.48 | 454.45 | 0.0056 | 10 |
| CI-5 | CI-5 - WQ-B | 44 | 0.04 | 0.95 | 0.04 | 1.08 | 5.62 | 0.24 | 453.82 | 4.9 | 7.84 | 0.33 | 453.98 | 5.27 | 18 inch | 11.38 | 452.91 | 0.010 | 10 |
| CI-6 | CI6 - CI5 | 103 | 0.12 | 0.95 | 0.11 | 0.15 | 5.62 | 0.65 | 454.48 | 3.03 | 7.84 | 0.90 | 454.57 | 3.36 | 12 inch | 3.84 | 454.01 | 0.010 | 10 |
| CI-7 | CI7-CI6 | 27 | 0.04 | 0.95 | 0.04 | 0.04 | 5.62 | 0.21 | 454.47 | 2.04 | 7.84 | 0.29 | 454.55 | 1.65 | 12 inch | 3.86 | 454.28 | 0.010 | 10 |
| WQ-B | | N/A | N/A | N/A | N/A | 1.08 | N/A | N/A | 453.38 | 4.97 | N/A | N/A | 453.54 | 5.68 | N/A | N/A | N/A | N/A | N/A |




## DRAINAGE PLAN

SCALE: 1"=20'-0"

0 10 20 40

### GRADING & DRAINAGE NOTES

1. ALL SPOT ELEVATIONS INDICATE FINISH GRADE OF SURFACE. ADJUSTMENTS MUST BE MADE TO ESTABLISH GRADES OF SUB-BASE OR SUBGRADE. SPOT ELEVATIONS ARE INCLUSIVE OF ANY LANDSCAPE MULCH REQUIRED.
2. PRIOR TO CONSTRUCTION OR DEMOLITION, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES SO THAT NEW CONSTRUCTION WILL NOT DAMAGE OR INTERFERE WITH EXISTING UTILITY LINES. SHOULD DAMAGE OCCUR, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR AND/OR REPLACE SAID DAMAGE AT THE CONTRACTOR'S EXPENSE. FINISHED REPAIRS OR REPLACEMENT SHALL MEET THE APPROVAL OF THE OWNER.
3. ALL EXCESS EXCAVATED MATERIAL OTHER THAN TOPSOIL IS TO BE REMOVED FROM THE SITE.
4. UNLESS OTHERWISE NOTED, ALL TREES AND VEGETATION SHALL BE PROTECTED DURING CONSTRUCTION. ALL VEGETATION, ROOTS, TREES, ETC. TO BE REMOVED SHALL BE REMOVED TO A MINIMUM DEPTH OF THREE FEET BELOW FINISHED GRADE. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NOT TO DAMAGE FOLIAGE, BRANCHES OR ROOTS OF EXISTING TREES TO BE SAVED. NO BURNING ON SITE.
5. BEFORE STARTING SITE EXCAVATION, CONTRACTOR SHALL STRIP ANY TOPSOIL FROM DEVELOPED PORTIONS OF THE SITE AND STORE IN A LOCATION THAT WILL NOT INTERFERE WITH SITE DEVELOPMENT OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR REDISTRIBUTING TOPSOIL IN ALL FINISHED GRADE AREAS, BACK FILLING CURBS, SIDEWALKS, ETC. TOPSOIL SHALL NOT BE DISTRIBUTED WHEN WET OR OVER COMPACTED.
6. CONTRACTOR SHALL PROVIDE ENGINEER WITH COMPACTION TESTING FROM AN INDEPENDENT TESTING AGENCY.
7. ELEVATIONS AND CONTOURS ON THIS PLAN ARE REFERENCED TO MEAN SEA LEVEL DATUM.
8. MINIMUM 12" CRUSHED STONE BACKFILL OVER STORM PIPING. STORM PIPING UNDER PAVED SURFACES TO BE BACKFILLED FULL DEPTH WITH CRUSHED STONE.
9. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY IF ROCK EXCAVATION FOR MASS GRADING OR TRENCHING IS REQUIRED. ALL EXCAVATION IS UNCLASSIFIED. THERE WILL BE NO PAYMENT FOR ROCK EXCAVATION.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXCAVATION QUANTITIES.
11. IT IS THE DESIGN INTENT FOR ALL WATER TO BE DIRECTED AWAY FROM THE PROPOSED AND EXISTING BUILDINGS.
12. BORROWED FILL MATERIALS ARE TO BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO USE ON THIS SITE.
13. CONTRACTOR TO LOCATE STOCKPILING OF SOILS IN THE STAGING AREA. WHEN THE CONTRACTOR HAS SELECTED THE LOCATION HE/SHE IS TO CONTACT THE ENGINEER TO VALIDATE THE LOCATION IS APPROPRIATE.
14. ALL DISTURBED GRADE AREAS TO BE SODDED AT COMPLETION OF PROJECT.
15. IF ANY EXISTING ASBESTOS COATED SEWER LINE IS UNEARTHED, IT WILL REQUIRE ABATEMENT IN ACCORDANCE WITH LOCAL, STATE AND/OR FEDERAL GUIDELINES . CONTRACTOR SHALL NOTIFY UNIVERSITY HEALTH & ENVIRONMENTAL SERVICES IMMEDIATELY.
16. ALL CONSTRUCTION AND MATERIALS INSTALLED WITHIN THE RIGHT-OF-WAY SHALL CONFORM WITH METRO PUBLIC WORKS STANDARDS.
17. CONTRACTOR SHALL VERIFY PROPOSED GRADES AND SLOPES MEET APPLICABLE CODE COMPLIANCE. CONTACT CARMAN OFFICE UPON ANY DISCREPANCY.

### CODED NOTES

| KEY | DESCRIPTION |
|---|---|
| 1 | SINGLE CURB INLET W/ SINGLE FRAME AND GRATE TYPE 1-L MSD STD. DWG. # D1-01-02 DG-02-03 |
| 2 | CATCH BASIN TYPE 1 MSD STD. DWG. #DC-01-01 |
| 3 | PRECAST MANHOLE - TYPE 1 W/ STANDARD FRAME & LID MSD STD. DWG. #GM-01-04, GM-05-03 |
| 4 | 18"X18" YARD DRAIN MSD STD. DWG. #DI-06-01 |
| 5 | ROLLED CURB INLET BY NEENAH FOUNDRY OR ENGINEERED EQUAL NEENAH R-3501-TR |
| 6 | 8" PERFORATED PIPE W/ SOCK. INSTALL WHERE INDICATED AT .5% MIN. SEE ARROWS FOR DIRECTION OF DRAINAGE. ENSURE POSITIVE DRAINAGE. |
| 7 | 6" PERFORATED HDPE WRAPPED IN FILTER FABRIC. DRAIN AT 1% MIN, CONNECT TO STORM AS INDICATED ON PLANS. |
| 8 | 10" OR 12" HDPE INTERNAL ROOF DRAIN AT MIN. 0.5% SLOPE. PROVIDE MIN. 12" COVER OVER PIPE & CONNECT TO STORM SYSTEM WITH WYE OR TEE FITTING. |
| 9 | FIELD ALTERNATE #1 - RAIN WATER HARVESTING TANK. REFER TO RAIN WATER HARVESTING SHEET FOR ADDITIONAL INFORMATION. |
| 10 | CLEAN OUT |
| 11 | CDS WATER QUALITY UNIT OR ENGINEERED EQUIVALENT TO TREAT FIRST FLUSH VOLUME OF 0.099 AC-FT OR Q=1.11 CFS |
| 12 | CDS WATER QUALITY UNIT OR ENGINEERED EQUIVALENT TO TREAT FIRST FLUSH VOLUME OF 0.204 AC-FT OR Q=1.22 CFS |
| 13 | TEE OR WYE INTO PIPE AS SHOWN WITH APPROVED FITTINGS |
| 14 | USE CAUTION AT UTILITY INTERSECTIONS. CONTRACTOR MAY NEED TO MODIFY DOWNSPOUT AND FOUNDATION DRAINAGE TO AVOID CONFLICTS WITH OTHER UTILITIES. |
| 15 | EXISTING CURB BOX INLET |
| 16 | JUNCTION BOX TYPE B BY SHERMAN DIXIE OR EQUAL DWG# SRS-584 |
| 17 | 8" HDPE INTERNAL ROOF DRAIN AT MIN. 0.5% SLOPE. PROVIDE MIN. 12" COVER OVER PIPE & CONNECT TO STORM SYSTEM WITH WYE OR TEE FITTING. |
| 18 | INFILTRATION BASIN MONITORING WELL: SEE DETAIL A / SD-7.2 |

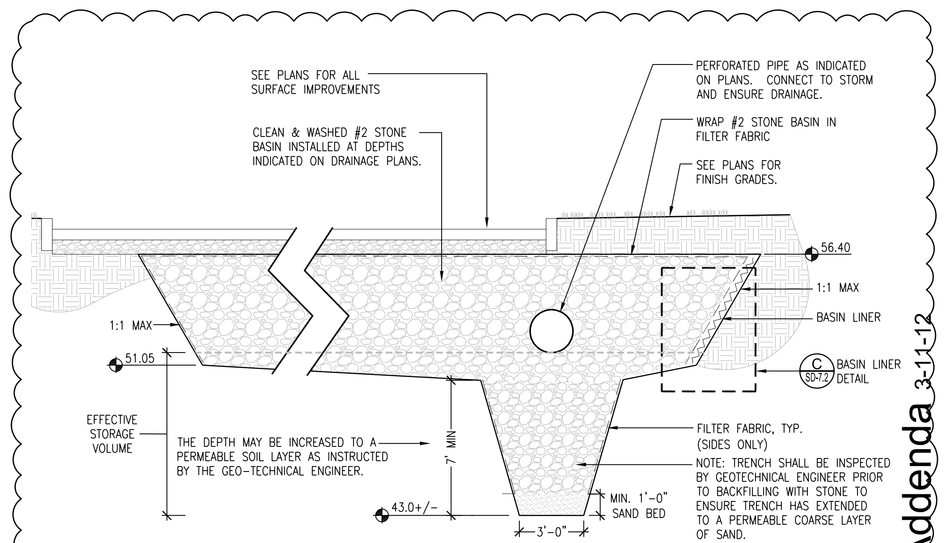
### PLAN LEGEND

| | |
|---|---|
| tw | TOP OF WALL |
| bw | BOTTOM OF WALL |
| tc | TOP OF CURB |
| bc | BOTTOM OF CURB |
| CBI | CURB BOX INLET |
| SI | SURFACE INLET |
| CI | CURB INLET |
| YD | YARD DRAIN |
| RIM | RIM ELEVATION |
| MH | MANHOLE |
| WQU | WATER QUALITY UNIT |
| JB | JUNCTION BOX |
| ex | EXISTING SPOT |
| HDPE | HIGH DENSITY POLYETHYLENE PIPE |
| DS | DOWN SPOUT |
| IRD | INTERNAL ROOF DRAIN |
| PP | PERFORATED PIPE |
| TD | TRENCH DRAIN |
| CO | CLEAN OUT |

### GRAPHIC LEGEND

| | |
|---|---|
| 4XX | PROPOSED CONTOUR |
| 4XX | EXISTING CONTOUR |
| +4XX | PROPOSED SPOT ELEVATION |
| | TOP OF BASIN LIMITS |
| | BOTTOM OF BASIN LIMITS |
| | BASIN LINER |

X — STRUCTURE TYPE
CB-1 — STRUCTURE ID
RIM:60.XX
IN(ID):60.XX — INCOMING LINE
IN(ID):60.XX
OUT:55.XX




A DETENTION BASIN A SECTION
SCALE: 1/2"=1'-0"

ADDENDUM #2: ITEM #15
DATED 3-02-2012

PURPOSE OF THESE DRAWINGS IS TO REFLECT ALL CHANGES AND CLARIFICATIONS MADE THRU PREVIOUSLY ISSUED ADDENDA. CONTRACTOR IS RESPONSIBLE FOR ADHERENCE TO IMPROVEMENTS REFLECTED IN THE CONTRACT BIDS AND SPECIFICATIONS.

FOR LOCATION OF UNDERGROUND UTILITIES, CALL B.U.D.
1-502-266-5123 (2) WORKING DAYS IN ADVANCE OF DIGGING

Consolidated Addenda 3-11-12

100 % CD's

University of Louisville - Student Recreational Facility (Bid Phase #4 ) Louisville, Ky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| # | Revision | Date |
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| | |
|---|---|
| Drawing Name / Description | DRAINAGE PLAN |
| U of L Project Number: | |
| A&E Project Number: | |
| Date: | JANUARY, 2012 |
| Drawn By: | SDS |
| Checked By: | JLC / KLW |

SD-7.0