

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

EAST AVENUE & PINE AVENUE FROM
FOREST AVE. (F.A.U. 1472) TO LONGCOMMON RD. (F.A.U. 3569)

SECTION: 06-00073-00-LS
ROADWAY RESURFACING AND ENHANCEMENT

PROJECT: TE-00D1(705)
VILLAGE OF RIVERSIDE
COOK COUNTY
C-91-030-07

FOR INDEX OF SHEETS, SEE SHEET NO. 2

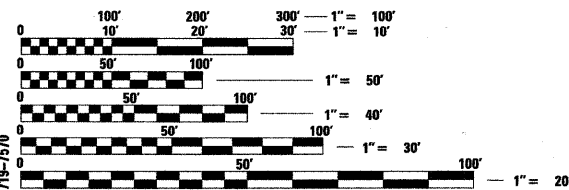
TRAFFIC DATA
ADT:

EAST AVENUE = 600 (2030)
PINE AVENUE = 600 (2030)

SPEED LIMIT:

EAST & PINE AVENUE = 20 MPH (POSTED)
30 MPH (DESIGN)

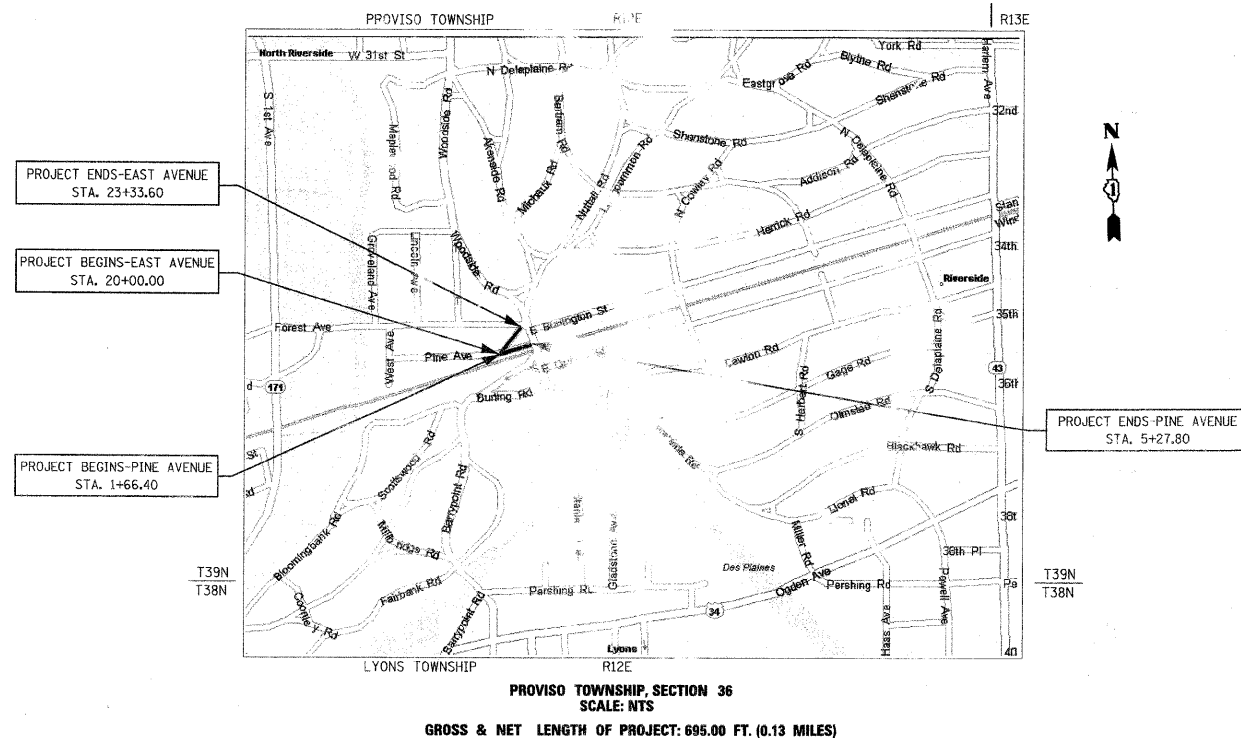
PROJECT LOCATED IN
VILLAGE OF RIVERSIDE



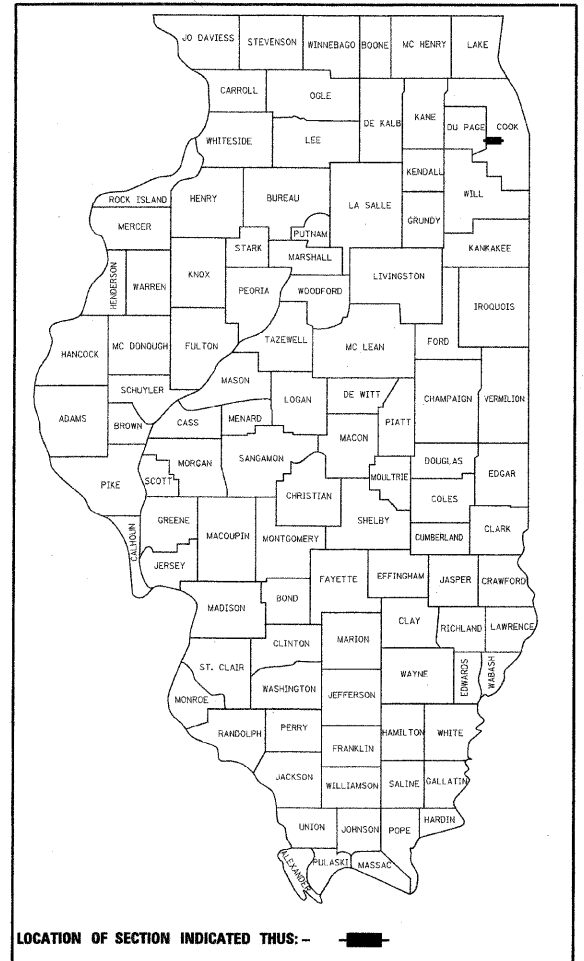
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 63133
DESIGN DESIGNATION: LOCAL ROAD



F.A.U. RTE. 1472 & 3569	SECTION 06-00073-00-LS	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 1
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT CONTRACT NO: 63133		



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved: 3-24-09
Kathleen F. Rich
Village of Riverside, Village Manager

Passed: APRIL 06, 2009
CHRISTOPHER HOLT
District #1 Engineer of Local Roads & Streets

Releasing for Bid
Based on Limited Review: APRIL 06, 2009
Diane M. O'Keefe
Deputy Director of Highways, Region #1 Engineer

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JJB JAMES J. BENES & ASSOCIATES
CONSULTING ENGINEERS
950 WARRENVILLE ROAD, SUITE 101
LISLE, IL 60532
(630) 719-7570

SIGNATURE: *[Signature]*
DATE: 3/27/09
REGISTERED PROFESSIONAL ENGINEER
IL LICENSE NO: 062-045055
EXP. DATE: NOVEMBER 1, 2009
FIELD: JAMES J. BENES & ASSOCIATES, INC.
CIVIL ENGINEERING
(SHEETS 1-17)

FIELD ENGINEER: MARILIN SOLOMON (847) 705-4407
CONSULTANT: JAMES J. BENES & ASSOCIATES, INC. (630) 719-7570

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
172	06-00073-00-LS	COOK	24	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				

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COMMITMENTS: NONE

LIST OF STATE STANDARDS

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 424001-05 CURB RAMPS FOR SIDEWALKS
- 442201-03 CLASS C AND D PATCHES
- 604001-03 FRAME AND LIDS TYPE 1
- 606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 701301-03 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701501-05 URBAN LANE CLOSURE 2L, 2W UNDIVIDED
- 701801-04 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
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- 720001-01 SIGN PANEL MOUNTING DETAILS
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- 720011-01 METAL POST FOR SIGNS, MARKINGS, AND DELINEATORS
- 814001-02 HANDHOLES

LIST OF DISTRICT ONE DETAILS

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- TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
- TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS
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GENERAL NOTES

1. ACCESS TO LOCAL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL GIVE THE MUNICIPALITY THREE (3) WORKING DAYS NOTICE PRIOR TO THE COMMENCEMENT OF WORK. (JAMES J. BENES AND ASSOCIATES, INC: (630) 719-7570)
3. ALL ELEVATIONS ARE ON U.S.G.S. DATUM.
4. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
5. NEITHER THE ENGINEER, NOR THE OWNER, SHALL ASSUME ANY OF THE RESPONSIBILITIES OF THE CONTRACTOR'S SUPERINTENDENT OR OF SUBCONTRACTORS. ADDITIONALLY, NEITHER THE ENGINEER, NOR THE OWNER, SHALL ADVISE ON, OR ISSUE DIRECTIONS CONCERNING, ASPECTS OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND/OR PROGRAMS IN CONNECTION WITH THE WORK.
6. THE LOCATIONS OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THEIR ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES. THE CONTRACTOR SHALL REPORT ANY ENCOUNTERED DISCREPANCIES TO THE ENGINEER AT ONCE. THE CONTRACTOR SHALL TAKE DUE CARE IN ALL PHASES OF CONSTRUCTION TO PROTECT ANY UTILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGES TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE MADE BY THE CONTRACTOR TO THE IRRIGATION SYSTEMS AND IT SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. THE CONTRACTOR WILL DETERMINE THE LOCATIONS OF DAMAGE AND EXTENT OF DAMAGE. ALL LOCATIONS OF REPAIR WORK AND EXTENT OF REPAIR SHALL BE APPROVED BY THE ENGINEER PRIOR TO PERFORMING THE WORK. THE SPRINKLER LINES SHALL BE PRESSURE TESTED. ANY PRESSURE LEAKS SHALL BE IDENTIFIED AND REPAIRS MADE PRIOR TO RETESTING THE SYSTEM FOR APPROVAL. ALL MATERIAL, LABOR AND EQUIPMENT USED TO LOCATE, REPAIR AND TEST THE DAMAGED IRRIGATION SYSTEMS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
8. THE CONTRACTOR SHALL KEEP THE CONSTRUCTION AREA FREE OF DEBRIS AND/OR OBJECTIONABLE MATERIALS DURING CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE SITE DAILY FOR DEBRIS ON THE ROADWAY SURFACE. THE RIGHT-OF-WAY SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION.
9. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION AND SHALL REPAIR ANY DRAINAGE FACILITIES DAMAGED DURING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND WILL NOT BE PAID FOR SEPARATELY.
10. THE RELOCATION OF SIGNS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
11. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, GAS, SEWERS AND WATER UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED.)
12. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ALL UTILITY COMPANIES.
13. THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS FOR EACH TYPE I OR TYPE II BARRICADE USED, ONE WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.
14. SAW CUTTING OF PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. SHALL BE TO FULL DEPTH AND SHALL RESULT IN CLEAN, STRAIGHT EDGE ON THE PORTION REMAINING. ALL SAW CUTTING SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM REMOVED.
15. STATIONING FOR ALL DRAINAGE STRUCTURES ARE GIVEN TO THE CENTER OF THE DRAINAGE STRUCTURE. OFFSETS FOR CURB LINE INLETS AND CATCH BASINS ARE GIVEN TO THE EDGE OF PAVEMENT. OFFSETS FOR ALL OTHER DRAINAGE STRUCTURES ARE GIVEN TO THE CENTER OF THE STRUCTURE. THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT ALL CURB LINE DRAINAGE STRUCTURES ARE PROPERLY ALIGNED WITH THE PROPOSED CURB AND GUTTER.
16. ALL STRUCTURE (MANHOLE, CATCH BASIN AND INLET) CONNECTIONS SHALL MEET THE REQUIREMENTS FOR FLEXIBLE WATER TIGHT CONNECTIONS PER ASTM C923.
17. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2009; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), "FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" MAY 1996 FIFTH EDITION, THE "DETAILS" IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS.

MWRD NOTES

1. THE MWRD LOCAL SEWER PERMIT SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK (CALL 708-588-4055.)
2. ELEVATION DATUM IS U.S.G.S.
3. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
4. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
5. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO:

Pipe Material Spec.	Joint Spec.	Pipe Material Spec.	Joint Spec.
<u>Vitrified Clay Pipe</u>		<u>PVC Gravity Sewer Pipe</u>	
VCP C-700	C-425	6"-15" dia. SDR 26	
VCP (No-Bell) C-700		D-3034	
Joint Collar	C-425		D-3212 or D-2855
	D-1784		
<u>Concrete Pipe C-14</u>	C-443	18"-27" dia. F/dy=46	
RCP C-76	C-443	F-679	
ACP C-428	D-1869		D-3212 or D-2855
<u>ABS Sewer Pipe</u>		<u>CISP A-74</u>	C-564
Solid Wall 6" dia. SDR 23.5		DIP A-21.51	A-21.11
ABS D-2751	D-2751		
<u>ABS Composite/Truss Pipe</u>			
8"-15" dia.			
ABS D-2680	D-2680		
6. ALL SANITARY SEWER CONSTRUCTION, (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE 1/4" TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES.

MATERIAL SHALL BE CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

7. "BAND-SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR MATERIALS.
8. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
 1. CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAF" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB TEE SADDLE.
 2. REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
 3. WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING A "BAND-SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
9. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 8 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMANS SHALL BE MAINTAINED UNLESS THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18 INCH VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CAN NOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATERMAIN, THE SEWER SHALL BE CONSTRUCTED TO WATERMAIN STANDARDS.
10. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
11. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT


INDEX OF DRAWINGS,
GENERAL NOTES AND
IDOT STANDARD DRAWINGS

SCALE: NTS
DATE: 12/5/08

DRAWN BY SMP
CHECKED BY BDH

SUMMARY OF QUANTITIES					
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	LANDSCAPE
				80% FED 20% VILLAGE 1000-2A	80% FED 20% VILLAGE Y003
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	522	522	
20400800	FURNISHED EXCAVATION	CU YD	40	40	
20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	77	77	
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	231	231	
25200700	SODDING, SPECIAL	SQ YD	1,200	1,200	
25200200	SUPPLEMENTAL WATERING	UNIT	26	26	
40201000	AGGREGATE FOR TEMPORARY ACCESS	TONS	100	100	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TONS	2	2	
40600300	AGGREGATE (PRIME COAT)	TONS	10	10	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TONS	4	4	
40600625	LEVELING BINDER (MACHINE METHOD), N50	TONS	105	105	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	47	47	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TONS	350	350	
40600895	CONSTRUCTING TEST STRIP	EACH	1	1	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,612	2,037	
42400800	DETECTABLE WARNINGS	SQ FT	80	80	
44000100	PAVEMENT REMOVAL	SQ YD	292	292	
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	2,263	2,263	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	788	788	
44000600	SIDEWALK REMOVAL	SQ FT	3,921	3,921	
44201737	CLASS D PATCHES, TYPE I, 8 INCH	SQ YD	8	8	
44201741	CLASS D PATCHES, TYPE II, 8 INCH	SQ YD	24	24	
44201745	CLASS D PATCHES, TYPE III, 8 INCH	SQ YD	39	39	
44201747	CLASS D PATCHES, TYPE IV, 8 INCH	SQ YD	45	45	
50300300	PROTECTIVE COAT	SQ YD	845	845	
56500600	DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED	EACH	1	1	
60250400	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID	EACH	1	1	
60255500	MANHOLES TO BE ADJUSTED	EACH	1	1	
60255800	MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	8	8	
60258200	MANHOLES TO BE RECONSTRUCTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	1	1	
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	1	
60265900	VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	3	3	
60266600	VALVE BOXES TO BE ADJUSTED	EACH	1	1	
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	555	555	
60608300	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.12	FOOT	30	30	

SUMMARY OF QUANTITIES					
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	LANDSCAPE
				80% FED 20% VILLAGE 1000-2A	80% FED 20% VILLAGE Y003
67100100	MOBILIZATION	L SUM	1	1	
70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	500	500	
72000100	SIGN PANEL-TYPE 1	SQ FT	2	2	
72900200	METAL POST - TYPE B	FOOT	14	14	
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS	SQ FT	77.4	77.4	
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	978	978	
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	272	272	
78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	95	95	
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	181	181	
78000850	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	35	35	
81400100	HANDHOLE	EACH	1	1	
81400115	HANDHOLE TO BE ADJUSTED	EACH	1	1	
89502380	REMOVE EXISTING HANDHOLE	EACH	1	1	
B2001167	TREE, CERCIIS CANADENSIS (EASTERN REDBUD) 8' HEIGHT, BALLED AND BURLAPPED	EACH	3		3
K1003680	MULCH	SQ YD	345		345
X0301407	PERENNIAL PLANTS, GALLON POT	UNIT	9		9
X0301895	PERENNIAL PLANTS, QUART POT	UNIT	9		9
XX001621	BRICK PAVER REMOVAL	SQ FT	30	30	
XX006561	PORTLAND CEMENT CONCRETE SIDEWALK 5", SPECIAL (SWANEE MIX)	SQ FT	4,845	4,845	
XX006668	HANDHOLE TO BE ADJUSTED WITH NEW FRAME AND COVER	EACH	1	1	
A2001920	TREE, TILIA AMERICANA REDMOND (REDMOND AMERICAN LINDEN), 4" CALIPER, BALLED AND BURLAPPED	EACH	3		3
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	
XX001978	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-3.12	FOOT	20	20	
XX001974	CLASS D PATCHES, TYPE I, 2 INCH	SQ YD	8	8	
XX001975	CLASS D PATCHES, TYPE II, 2 INCH	SQ YD	24	24	
XX001976	CLASS D PATCHES, TYPE III, 2 INCH	SQ YD	39	39	
XX001977	CLASS D PATCHES, TYPE IV, 2 INCH	SQ YD	45	45	
XX001978	ARCHITECTURAL LIGHTING SYSTEM	EACH	1		1
XX001979	ORNAMENTAL METAL RAILING SYSTEM	FOOT	32		32
XX001980	PLANTING SOIL, FURNISH AND PLACE, 24"	SQ YD	240		240
C2001905	SHRUB, ARONIA MELANOCARPA 'IROQUOIS BEAUTY' (IROQUOIS BEAUTY BLACK CHOKEBERRY), 24-INCH HEIGHT, 5-GALLON CONTAINER	EACH	25		25
C2001905	SHRUB, ROSA 'RADCON' (RADCON PINK KNOCK-OUT ROSE), 24-INCH HEIGHT, 5-GALLON CONTAINER	EACH	27		27

LEGEND
 - DENOTES SPECIALTY ITEMS

REVISIONS	
NAME	DATE

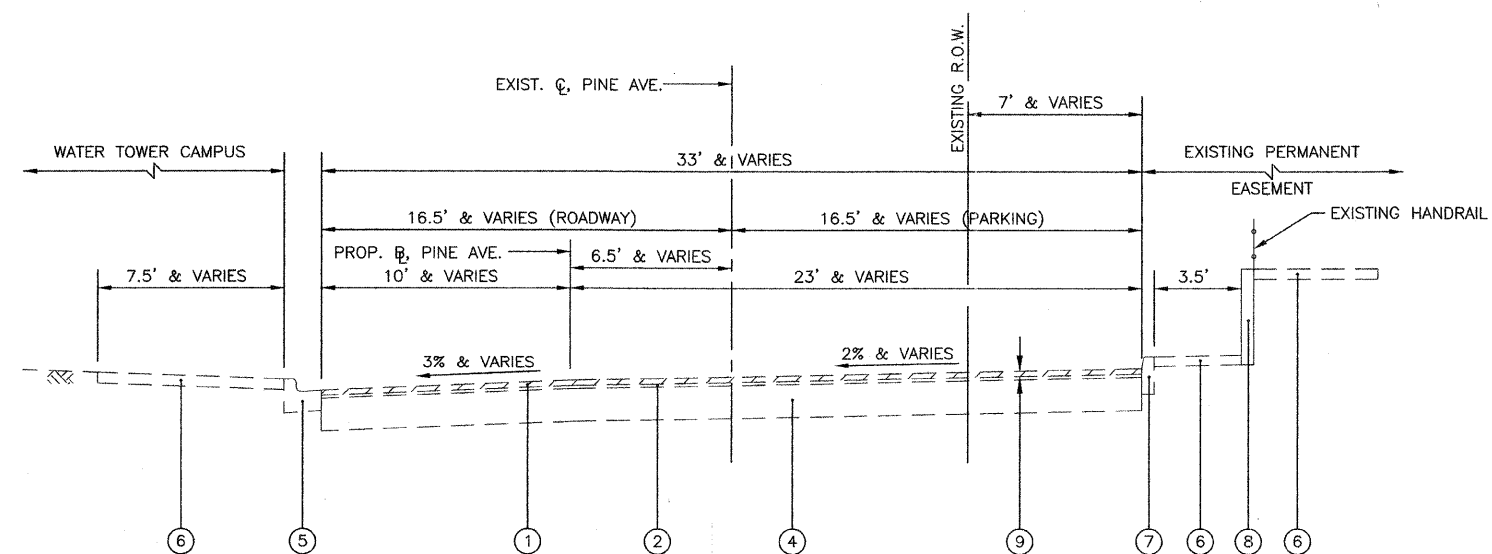
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAU ROUTES 1472 & 3569
 VILLAGE OF RIVERSIDE
 RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

SUMMARY OF QUANTITIES

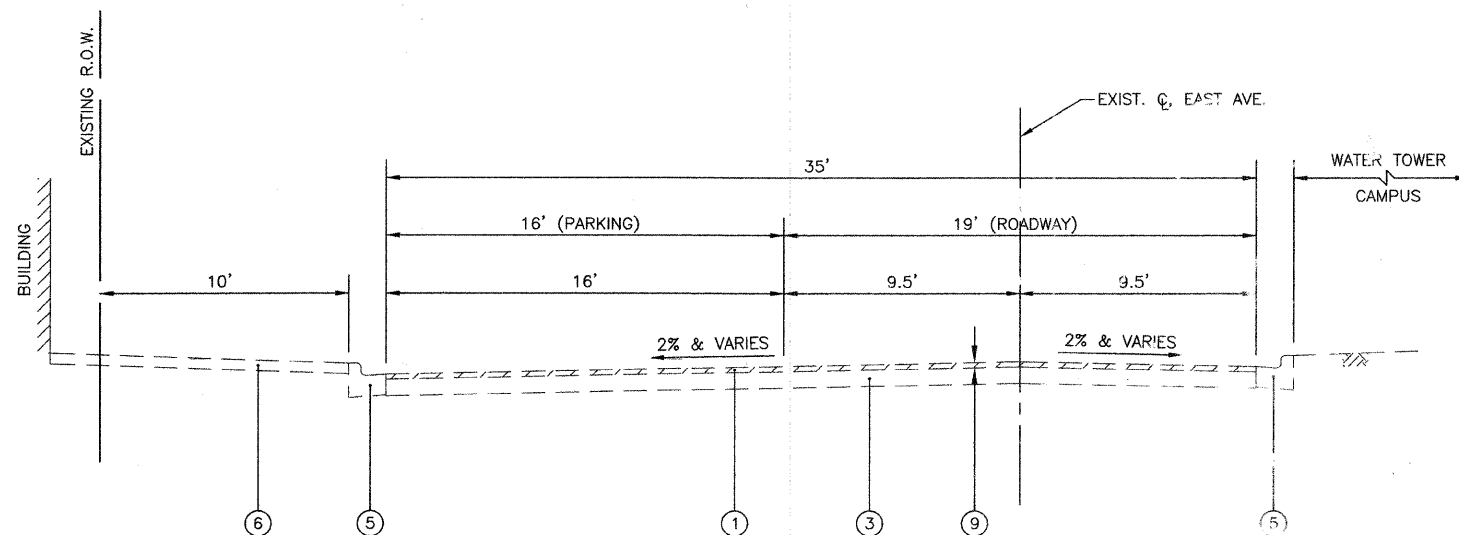
SCALE: NTS
 DATE: 12/01/08

DRAWN BY SMP
 CHECKED BY BDH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4724 3569	06-00073-00-LS	COOK	24	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO.				



**EXISTING TYPICAL SECTION - PINE AVENUE
STA. 1+66.40 TO STA. 5+27.80**



**EXISTING TYPICAL SECTION - EAST AVENUE
STA. 20+00 TO STA. 23+33.60**

LEGEND

- ① EXISTING HOT-MIX ASPHALT SURFACE COURSE, 2 1/2" & VARIES
- ② EXISTING HOT-MIX ASPHALT PAVEMENT, 1 1/2" & VARIES
- ③ EXISTING P.C.C. BASE COURSE, 8" & VARIES
- ④ EXISTING AGGREGATE BASE COURSE, 16" & VARIES
- ⑤ EXISTING CONCRETE CURB & GUTTER, TYPE B-6.12
- ⑥ EXISTING P.C.C. SIDEWALK
- ⑦ EXISTING CONCRETE CURB, TYPE B
- ⑧ EXISTING RETAINING WALL
- ⑨ HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EAST AVENUE TO PINE AVENUE
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

EXISTING TYPICAL SECTIONS

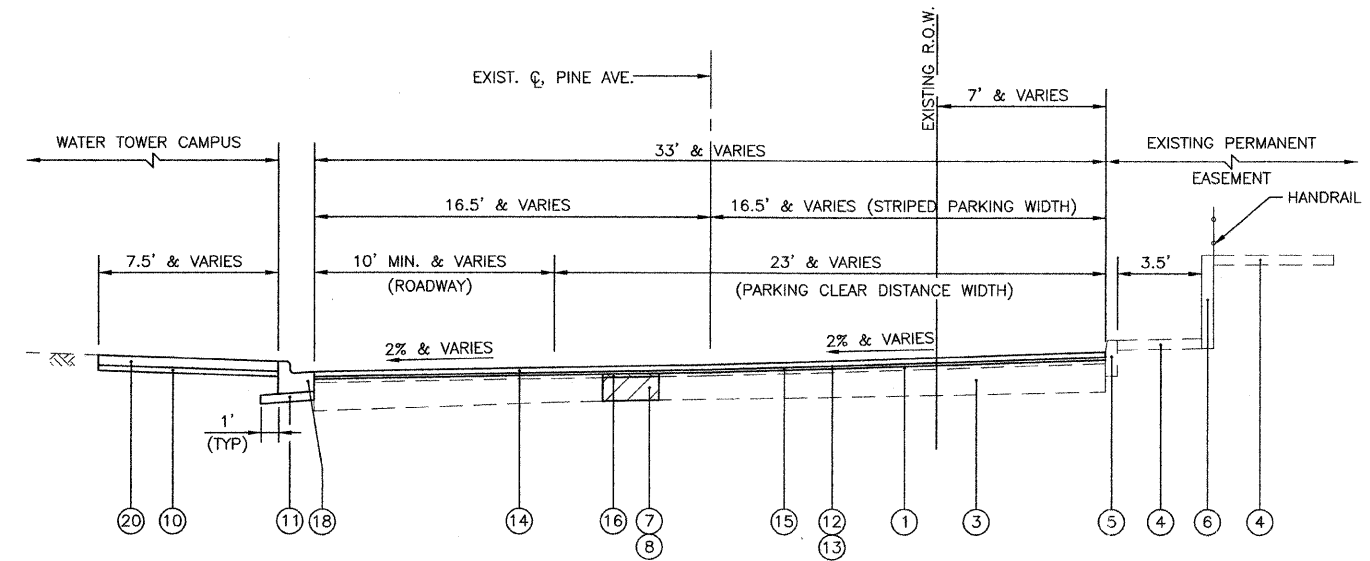
SCALE: 1"=20'
DATE: 12/01/08

DRAWN BY: SMP
CHECKED BY: BDH

F.A.U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4724 3569	06-00073-00-LS	COOK	24	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AC TYPE	VOIDS
PAVEMENT RESURFACING		
HOT-MIX ASPHALT SURFACE COURSE, MIX "C" N50, 2 1/2" (IL-9.5mm)	PG 64-22	4% @ 50 Gyr.
LEVEL BINDER (MACHINE METHOD), N50, (IL-9.5mm)	PG 64-22*	4% @ 50 Gyr.
PATCHING		
CLASS D PATCHES, 2" (HMA BINDER IL-19mm)	PG 64-22*	4% @ 70 Gyr.
CLASS D PATCHES, 8" (HMA BINDER IL-19mm)	PG 64-22*	4% @ 70 Gyr.

NOTE: 1) THE UNIT WEIGHT USED TO CALCULATE ALL HMA QUANTITIES IS 112 LB/SY/IN
 2) *-WHEN RAP EXCEEDS 20% THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22



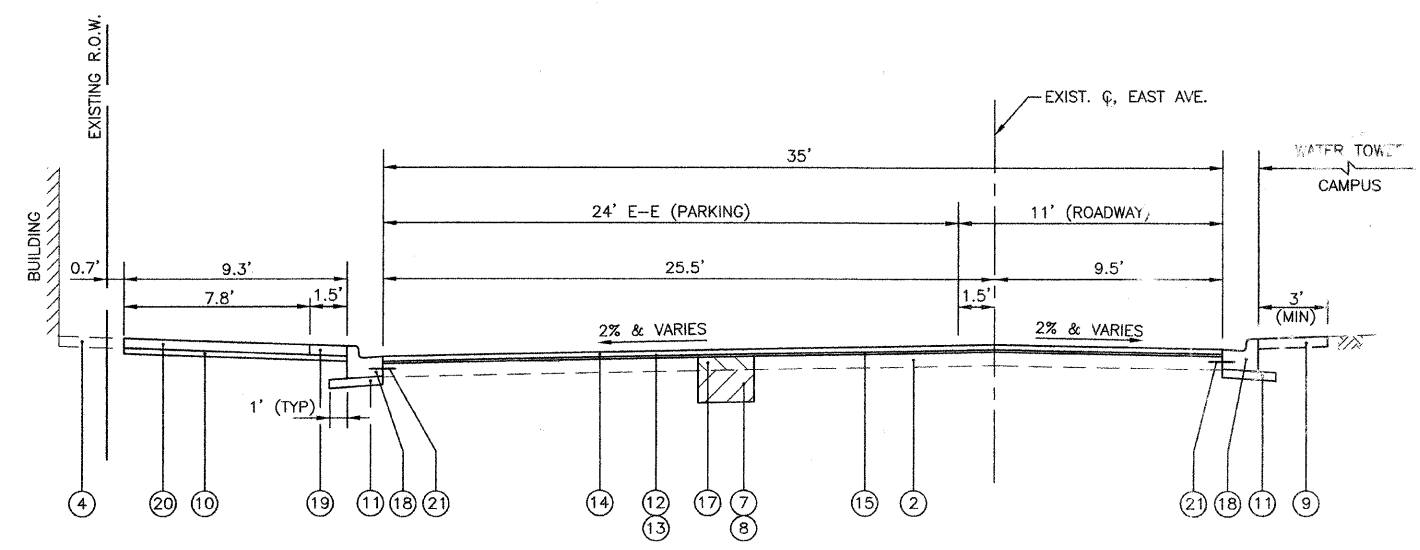
PROPOSED TYPICAL SECTION - PINE AVENUE
 STA. 1+66.40 TO STA. 5+27.80

PAVEMENT DESIGN CALCULATIONS			
DATE:	NOVEMBER 18, 2008		
IMPROVEMENT TYPE:	FLEXIBLE PAVEMENT CROSS SECTION (RESURFACING)		
LOCATION:	PINE AVENUE		
CLASSIFICATION OF ROADWAY:	CLASS III ROADWAY (ADT > 400 AND < OR = 2000)		
TRAFFIC FACTOR = DP((0.073*PV)+(44.350*SU)+(154.943*MU)/1000000)	50 %PASS. VEHICLES		
DESIGN LANE VOL. % OF ADT	100 % TRUCKS		
DESIGN PERIOD YEARS (DP)	20 YEARS		
% OF PASSENGER VEHICLES	98.00 %		
% OF SINGLE UNIT TRUCKS	1.90 %		
% OF MULTI UNIT TRUCKS	0.10 %		
AVERAGE DAILY TRAFFIC	=	600	TRAFFIC FACTOR.....
NO. OF PASSENGER VEHICLES (PV)	=	588	0.012830
NO. OF SINGLE UNIT TRUCKS (SU)	=	11	I.B.R.....
NO. OF MULTI UNIT TRUCKS (MU)	=	1	2.5
			STRUCTURAL NUMBER (S _n)
			2.20
MATERIAL THICKNESS	STRUCTURAL MATERIAL	COEFFICIENT	Dt
2.50	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N50	0.40	1.00
1.50	EXIST. HMA BINDER COURSE	0.22	0.33
16.00	EXIST. SUBBASE GRAN. MATL.	0.08	1.28
TOTAL Dt Provided =			2.61

PINE AVENUE

PAVEMENT DESIGN CALCULATIONS			
DATE:	NOVEMBER 18, 2008		
IMPROVEMENT TYPE:	COMPOSITE PAVEMENT CROSS SECTION (RESURFACING)		
LOCATION:	EAST AVENUE		
CLASSIFICATION OF ROADWAY:	CLASS III ROADWAY (ADT > 400 AND < OR = 2000)		
TRAFFIC FACTOR = DP((0.073*PV)+(44.350*SU)+(154.943*MU)/1000000)	50 %PASS. VEHICLES		
DESIGN LANE VOL. % OF ADT	100 % TRUCKS		
DESIGN PERIOD YEARS (DP)	20 YEARS		
% OF PASSENGER VEHICLES	98.00 %		
% OF SINGLE UNIT TRUCKS	1.90 %		
% OF MULTI UNIT TRUCKS	0.10 %		
AVERAGE DAILY TRAFFIC	=	600	TRAFFIC FACTOR.....
NO. OF PASSENGER VEHICLES (PV)	=	588	0.012830
NO. OF SINGLE UNIT TRUCKS (SU)	=	11	I.B.R.....
NO. OF MULTI UNIT TRUCKS (MU)	=	1	2.5
			COMPOSITE STRUCTURAL STRUCTURAL NUMBER (S _n)
			2.00
MATERIAL THICKNESS	STRUCTURAL MATERIAL	COEFFICIENT	Dt
2.50	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N50	0.40	1.00
8.00	EXIST. P.C.C. PAVEMENT	0.17	1.36
0.00	EXIST. SUBBASE GRAN. MATL.	0.08	0.00
TOTAL Dt Provided =			2.36

EAST AVENUE



PROPOSED TYPICAL SECTION - EAST AVENUE
 STA. 20+00 TO STA. 23+33.60

- LEGEND**
- EXISTING HMA PAVEMENT, 1 1/2" L. VARIES
 - EXISTING P.C.C. BASE COURSE, 8" & VARIES
 - EXISTING AGGREGATE BASE COURSE, 16" & VARIES
 - EXISTING P.C.C. SIDEWALK
 - EXISTING CONCRETE CURB, TYPE B
 - EXISTING RETAINING WALL
 - POROUS GRANULAR EMBANKMENT, SUBGRADE (AT LOCATIONS DESIGNATED BY THE ENGINEER)
 - GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (AT LOCATIONS DESIGNATED BY THE ENGINEER)
 - SODDING, SPECIAL (INCLUDES 4" PULVERIZED TOP SOIL AND FERTILIZER) (AT LOCATIONS DESIGNATED BY THE ENGINEER)
 - SUB-BASE GRANULAR MATERIAL, TYPE B 2" (COST INCLUDED IN P.C.C. SIDEWALK)
 - SUB-BASE GRANULAR MATERIAL, TYPE B 4" (COST INCLUDED IN CONCRETE CURB AND GUTTER)
 - BITUMINOUS MATERIALS (PRIME COAT)
 - AGGREGATE (PRIME COAT)
 - HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 2 1/2"
 - LEVELING BINDER (MACHINE METHOD), N70, VARIABLE THICKNESS (MINIMUM 3/4" THICKNESS)
 - CLASS D PATHES, 2" (AT LOCATIONS DESIGNATED BY THE ENGINEER)
 - CLASS D PATHES, 8" (AT LOCATIONS DESIGNATED BY THE ENGINEER)
 - COMBINATION CONCRETE CURB AND GUTTER, TYPE B-8.12 (THICKNESS OF GUTTER FLAG SHALL BE 10" EXCEPT WHERE ADJACENT TO PCC PAVEMENT. WHEN ADJACENT TO PCC PAVEMENT, BOTTOM OF GUTTER SHALL BE AT THE SAME GRADE AS THE BOTTOM OF THE P.C.C. PAVEMENT)
 - PORTLAND CEMENT CONCRETE SIDEWALK 5" (AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER)
 - PORTLAND CEMENT CONCRETE SIDEWALK 5", SPECIAL (SWANEE MIX) (AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER)
 - 24" LONG DEFORMED EPOXY-COATED NO. 8 TIE BARS, 24" CTRS. DRILLED AND GROUTED IN PLACE (COST INCLUDED IN CONCRETE CURB AND GUTTER)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EAST AVENUE TO PINE AVENUE
 VILLAGE OF RIVERSIDE
 RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

PROPOSED TYPICAL SECTIONS

SCALE: 1"=20'
 DATE: 12/01/08

DRAWN BY: SMP
 CHECKED BY: BDH

EARTHWORK		
LOCATION	REMOVAL & DISPOSAL OF UNSUITABLE MAT.* (CU YD)	FURNISHED EXCAVATION** (CU YD)
RAILWAY/WATER TOWER CAMPUS AREA	415	40
EAST AVE. AND PINE AVE. LANDSCAPE RESTORATION	30	0
EAST AVE. AND PINE AVE. UNDERCUTS	77	0
TOTAL QUANTITY =	522	40

*ALL CUT MATERIAL SHALL BE HAULED OFF SITE DUE TO NO ONSITE STORAGE LOCATIONS.
 **ALL FILL MATERIAL (EMBANKMENT) SHALL BE BROUGHT IN FROM OFF-SITE LOCATION, SINCE THE ONSITE EXCAVATED MATERIAL MUST BE HAULED OFF SITE.

CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID		
STATION	OFFSET (FEET)	QUANTITY (EACH)
EAST AVENUE 20+97	9.5' RT	1
TOTAL QUANTITY =		1

VALVE VAULTS TO BE ADJUSTED		
STATION	OFFSET (FEET)	QUANTITY (EACH)
PINE AVENUE 3+88	18' LT	1
TOTAL QUANTITY =		1

HANDHOLE		
STATION	OFFSET (FEET)	QUANTITY (EACH)
EAST AVENUE 21+84	17' RT	1
TOTAL QUANTITY =		1

MANHOLES TO BE ADJUSTED		
STATION	OFFSET (FEET)	QUANTITY (EACH)
EAST AVENUE 21+03	13' LT	1
TOTAL QUANTITY =		1

VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID		
STATION	OFFSET (FEET)	QUANTITY (EACH)
EAST AVENUE 21+95	10' LT	1
22+07	17' RT	1
22+15	17' RT	1
TOTAL QUANTITY =		3

HANDHOLE TO BE ADJUSTED		
STATION	OFFSET (FEET)	QUANTITY (EACH)
PINE AVENUE 3+17	21' LT	1
TOTAL QUANTITY =		1

MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID		
STATION	OFFSET (FEET)	QUANTITY (EACH)
PINE AVENUE 1+80	2' LT	1
2+42	1' RT	1
2+81	18' RT	1
4+11	8' RT	1
4+70	6' RT	1
4+97	10' LT	1
EAST AVENUE 22+06	8' RT	1
23+12	9' LT	1
TOTAL QUANTITY =		8

VALVE BOXES TO BE ADJUSTED		
STATION	OFFSET (FEET)	QUANTITY (EACH)
PINE AVENUE 4+04	30' L	1
TOTAL QUANTITY =		1

REMOVE EXISTING HANDHOLE		
STATION	OFFSET (FEET)	QUANTITY (EACH)
EAST AVENUE 21+84	17' RT	1
TOTAL QUANTITY =		1

HANDHOLE TO BE ADJUSTED WITH NEW FRAME AND COVER		
STATION	OFFSET (FEET)	QUANTITY (EACH)
PINE AVENUE 3+96	39' LT	1
TOTAL QUANTITY =		1

MANHOLES TO BE RECONSTRUCTED WITH NEW TYPE 1 FRAME, CLOSED LID		
STATION	OFFSET (FEET)	QUANTITY (EACH)
PINE AVENUE 4+92	16' RT	1
TOTAL QUANTITY =		1

REVISIONS	
NAME	DATE

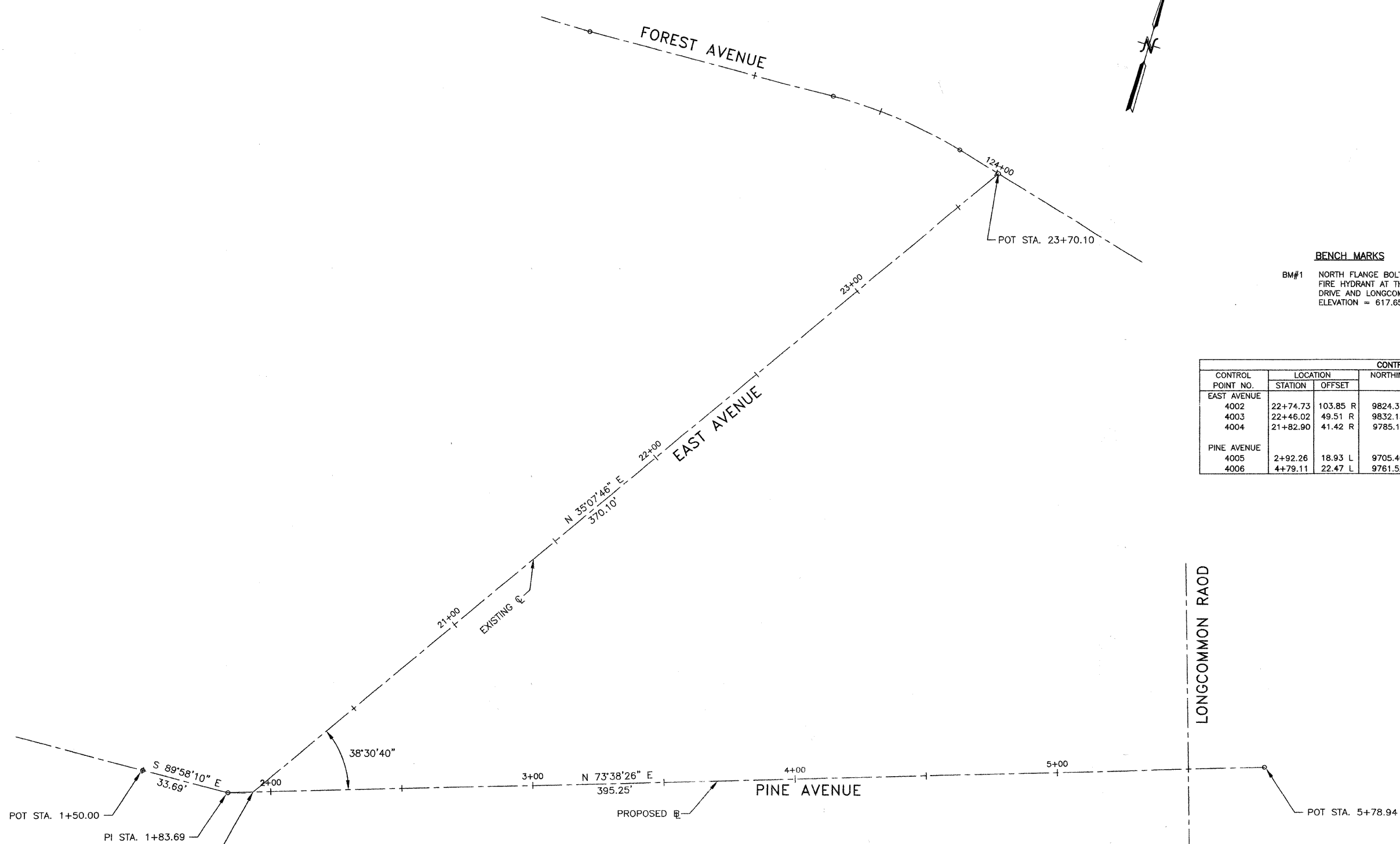
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAU ROUTES 1472 & 3569
 VILLAGE OF RIVERSIDE
 RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

SCHEDULE OF QUANTITIES

SCALE: N/A
 DATE: 12/01/08

DRAWN BY SMP
 CHECKED BY BDH

FAU. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3569	06-00073-00-LS	COOK	24	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				



BENCH MARKS
 BM#1 NORTH FLANGE BOLT ON FIRE HYDRANT.
 FIRE HYDRANT AT THE INTERSECTION OF WOODSIDE
 DRIVE AND LONGCOMMON ROAD.
 ELEVATION = 617.65

CONTROL POINT NO.	LOCATION		NORTHING	EASTING	ELEV	DESCRIPTION
	STATION	OFFSET				
EAST AVENUE						
4002	22+74.73	103.85 R	9824.3726	9997.6200	617.46	CUT CROSS
4003	22+46.02	49.51 R	9832.1592	9836.6554	617.10	CUT CROSS
4004	21+82.90	41.42 R	9785.1911	9893.7285	616.60	PK NAIL
PINE AVENUE						
4005	2+92.26	18.93 L	9705.4997	9844.2931	616.70	CUT CROSS
4006	4+79.11	22.47 L	9761.5254	10022.5763	616.50	CUT CROSS

POT STA. 1+50.00
 PI STA. 1+83.69
 STA. 1+93.23 (PINE AVE.)=
 STA. 20+00.00 (EAST AVE.)

CURVE NO.	Δ	D _a	T	R	L	E	POT/PI STATION	POT/PI COORDINATES		PC STATION	PC COORDINATES		PT STATION	PT COORDINATES	
								NORTHING	EASTING		NORTHING	EASTING		NORTHING	EASTING
PINE AVENUE							1+50.00	9656.7689	9711.7595						
							1+83.89	9656.7510	9745.4454						
							5+78.94	9768.0796	10124.6959						
EAST AVENUE							20+00.00	9659.4390	9754.6023						
							23+37.10	9962.1310	9967.5698						

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAU ROUTES 1472 & 3569
 VILLAGE OF RIVERSIDE
 RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

ALIGNMENT AND BENCH MARKS

SCALE: 1"=20'
 DATE: 12/01/08

DRAWN BY: SMP
 CHECKED BY: BDH

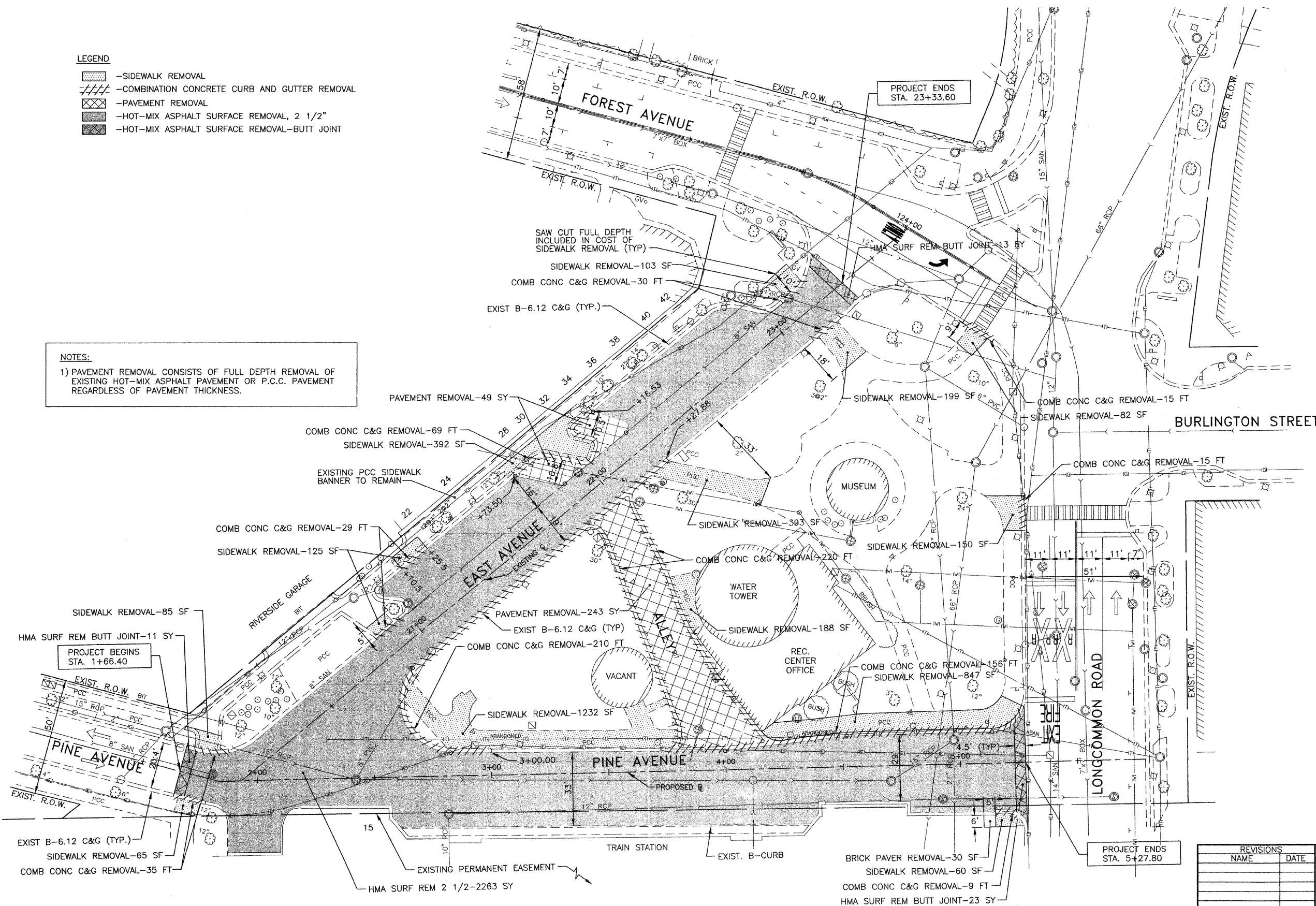
FAU RTE 1472 3569	SECTION 06-00073-00-LS	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 8
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
CONTRACT NO. 63133				

LEGEND

- SIDEWALK REMOVAL
- COMBINATION CONCRETE CURB AND GUTTER REMOVAL
- PAVEMENT REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT

NOTES:

1) PAVEMENT REMOVAL CONSISTS OF FULL DEPTH REMOVAL OF EXISTING HOT-MIX ASPHALT PAVEMENT OR P.C.C. PAVEMENT REGARDLESS OF PAVEMENT THICKNESS.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

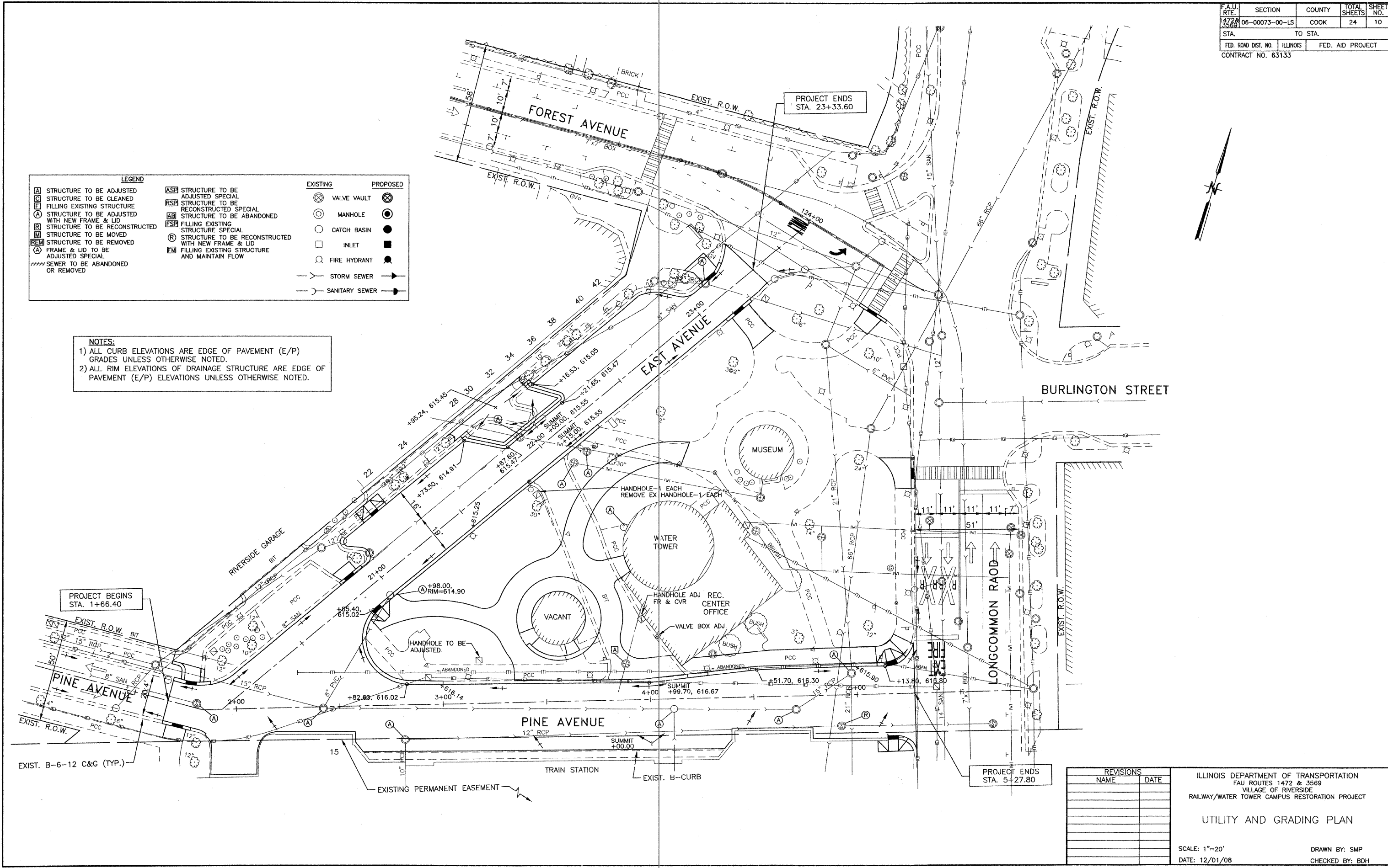
SITE PREPARATION PLAN

SCALE: 1"=20'
DATE: 12/01/08
DRAWN BY: SMP
CHECKED BY: BOH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472	06-00073-00-LS	COOK	24	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				

LEGEND		EXISTING	PROPOSED
[A]	STRUCTURE TO BE ADJUSTED	[X]	VALVE VAULT
[C]	STRUCTURE TO BE CLEANED	[O]	MANHOLE
[F]	FILLING EXISTING STRUCTURE	[O]	CATCH BASIN
[A]	STRUCTURE TO BE ADJUSTED WITH NEW FRAME & LID	[□]	INLET
[R]	STRUCTURE TO BE RECONSTRUCTED	[FH]	FIRE HYDRANT
[M]	STRUCTURE TO BE MOVED	[SS]	STORM SEWER
[R]	FRAME & LID TO BE ADJUSTED SPECIAL	[SS]	SANITARY SEWER
[//]	SEWER TO BE ABANDONED OR REMOVED		
[ASP]	STRUCTURE TO BE ADJUSTED SPECIAL		
[RSP]	STRUCTURE TO BE RECONSTRUCTED SPECIAL		
[AB]	STRUCTURE TO BE ABANDONED		
[FSP]	FILLING EXISTING STRUCTURE SPECIAL		
[R]	STRUCTURE TO BE RECONSTRUCTED WITH NEW FRAME & LID		
[FM]	FILLING EXISTING STRUCTURE AND MAINTAIN FLOW		

NOTES:
 1) ALL CURB ELEVATIONS ARE EDGE OF PAVEMENT (E/P) GRADES UNLESS OTHERWISE NOTED.
 2) ALL RIM ELEVATIONS OF DRAINAGE STRUCTURE ARE EDGE OF PAVEMENT (E/P) ELEVATIONS UNLESS OTHERWISE NOTED.



REVISIONS	
NAME	DATE

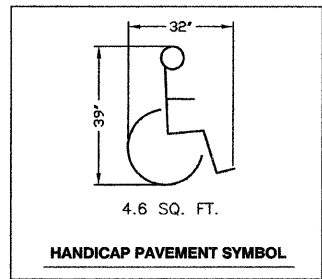
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAU ROUTES 1472 & 3569
 VILLAGE OF RIVERSIDE
 RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

UTILITY AND GRADING PLAN

SCALE: 1"=20'
 DATE: 12/01/08

DRAWN BY: SMP
 CHECKED BY: BDH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3569	06-00073-00-LS	COOK	24	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				



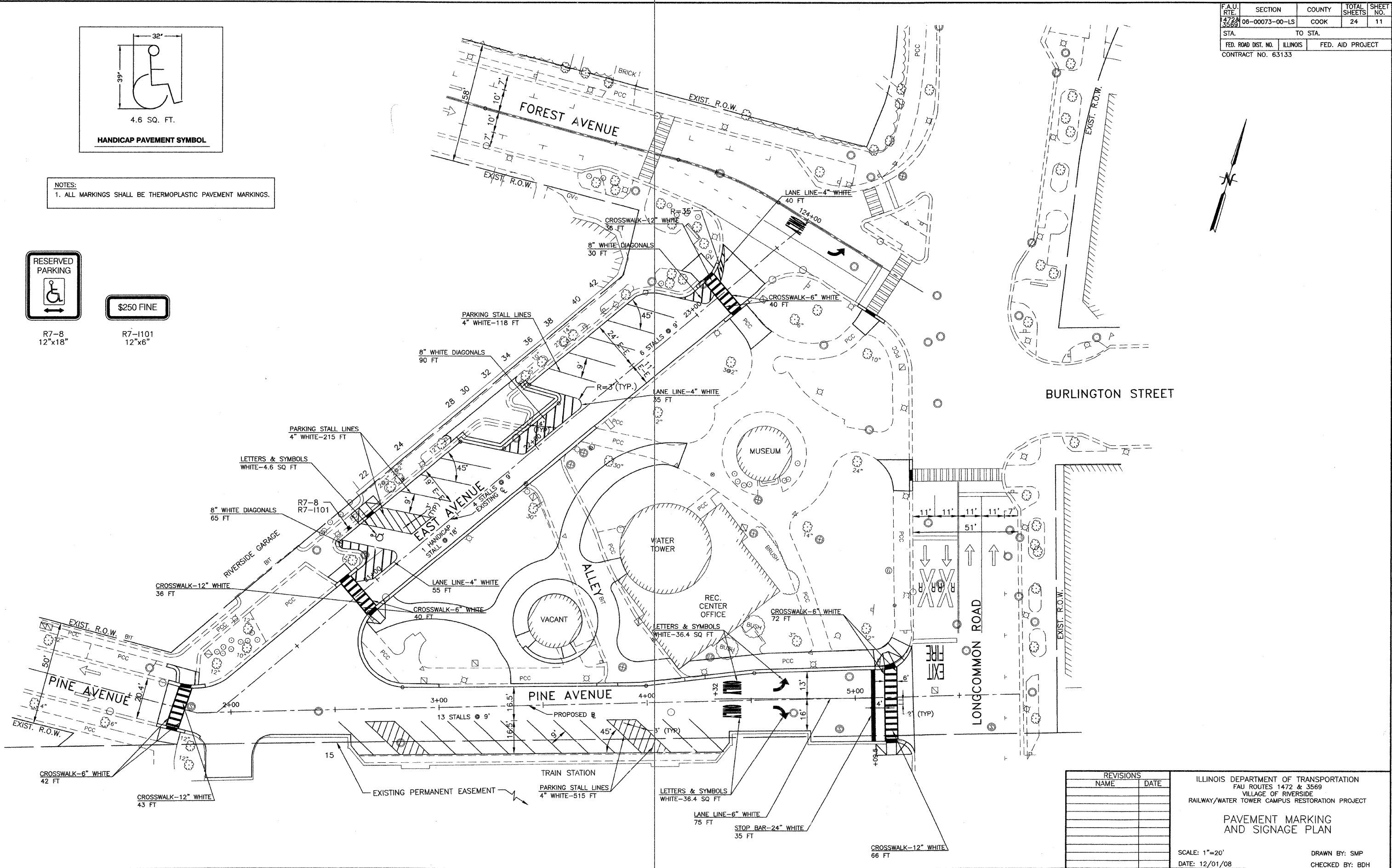
NOTES:
1. ALL MARKINGS SHALL BE THERMOPLASTIC PAVEMENT MARKINGS.



R7-8
12"x18"



R7-1101
12"x6"



BURLINGTON STREET

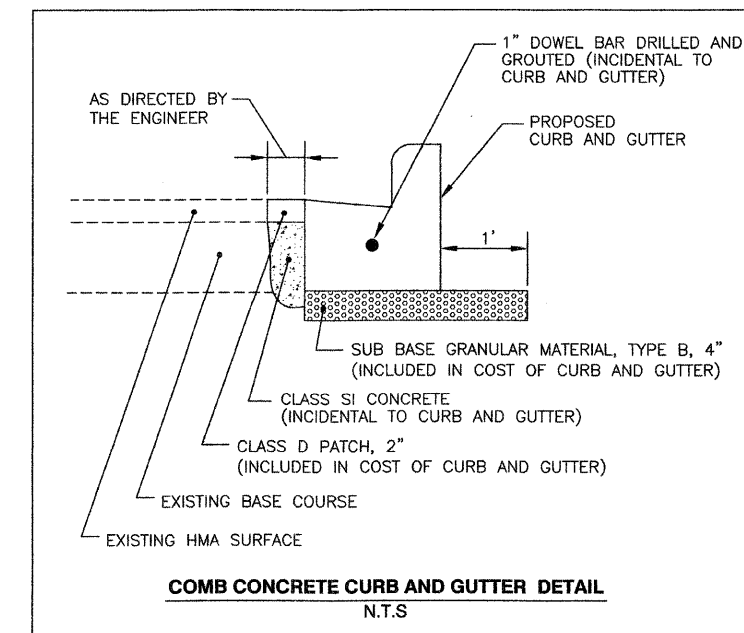
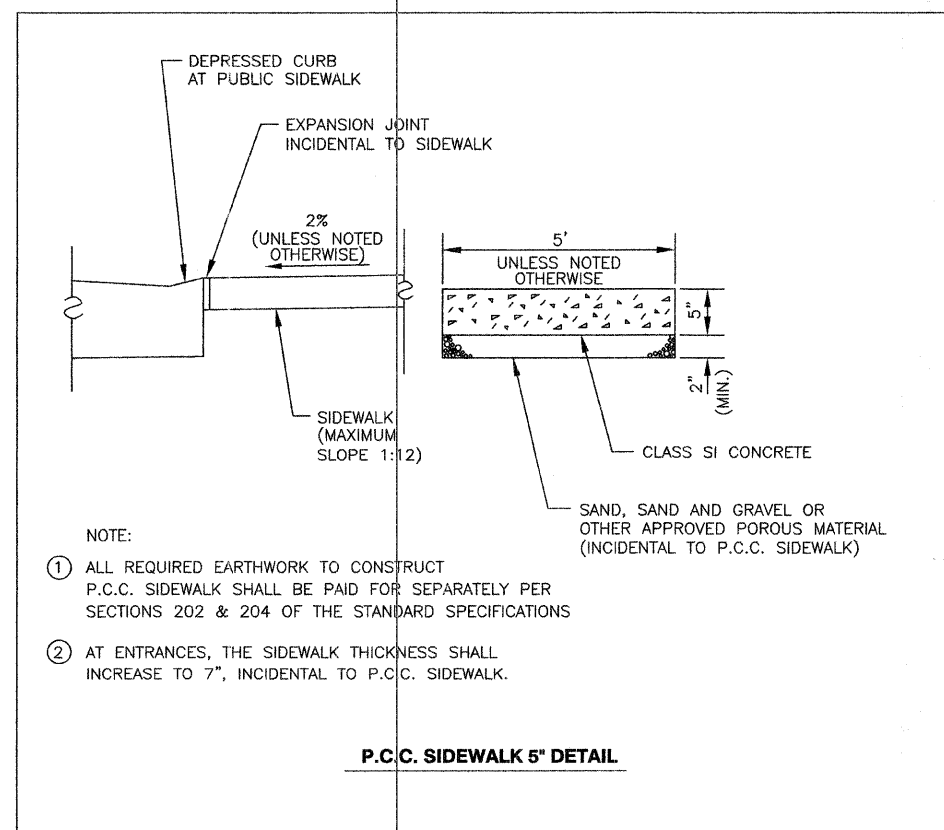
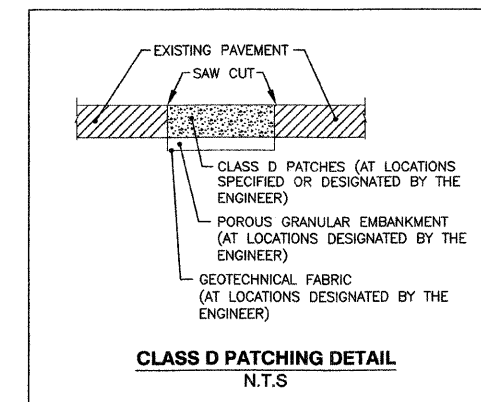
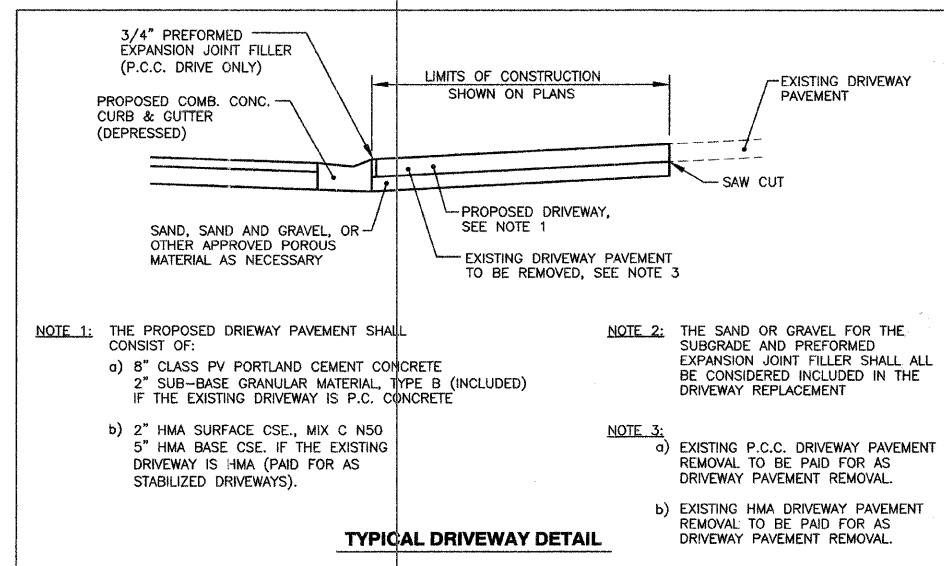
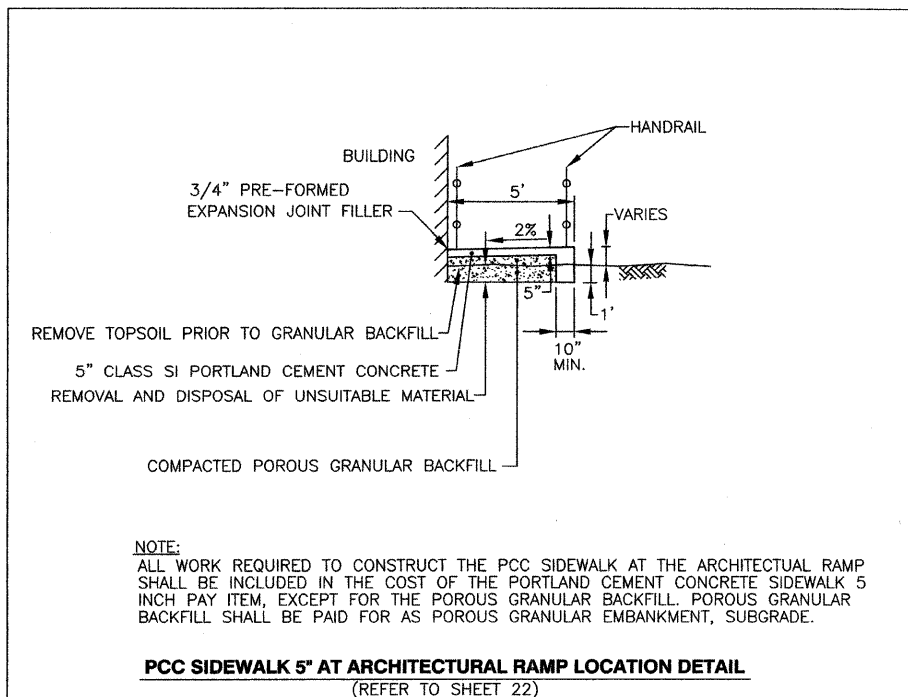
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

PAVEMENT MARKING AND SIGNAGE PLAN

SCALE: 1"=20'
DATE: 12/01/08

DRAWN BY: SMP
CHECKED BY: BDH



REVISIONS	
NAME	DATE

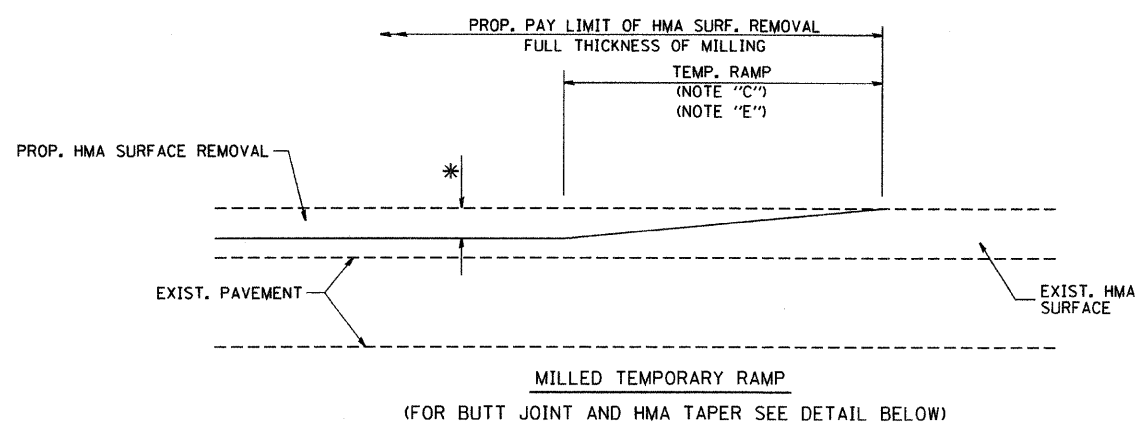
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

CONSTRUCTION DETAILS

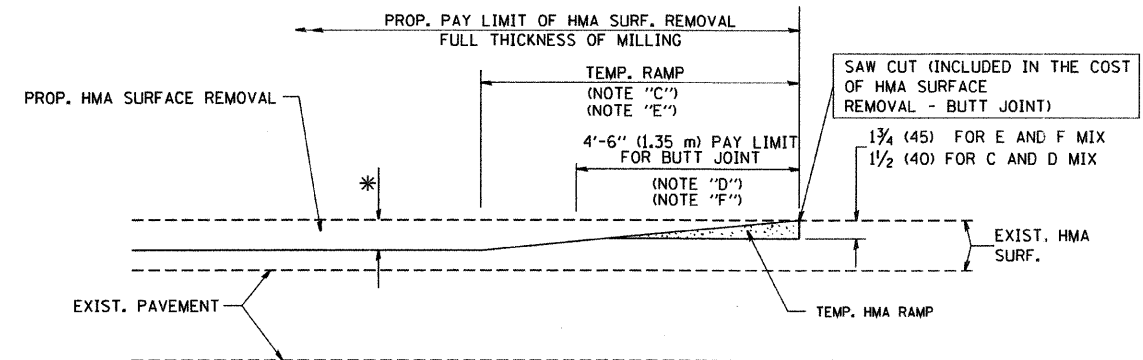
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DATE: 12/01/08

DRAWN BY SMP
CHECKED BY BDH

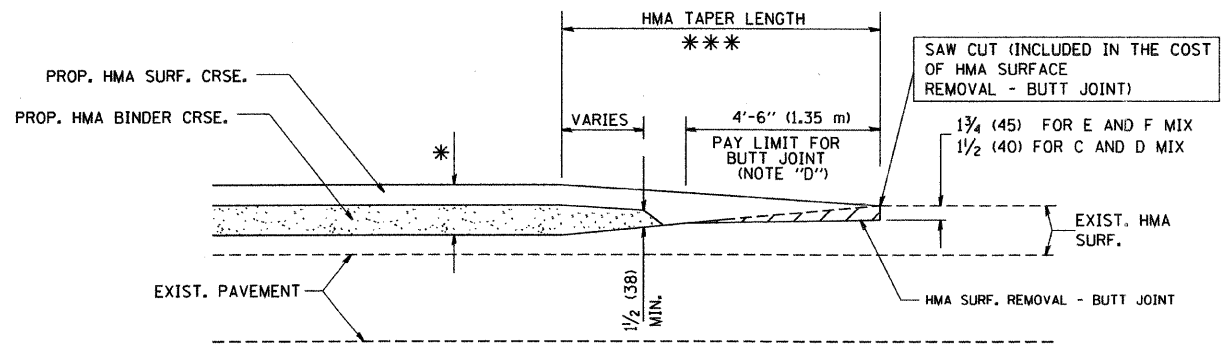
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3559	06-00073-00-LS	COOK	24	13
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 63133				



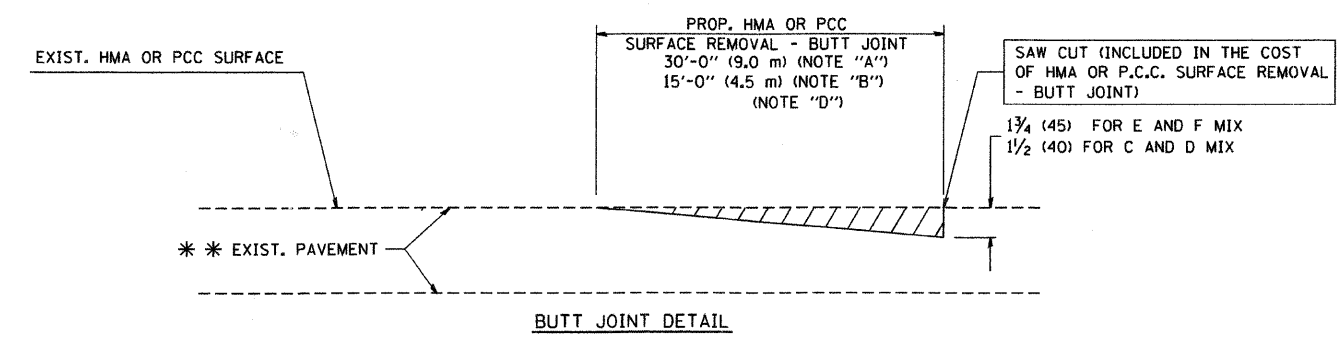
OPTION 1



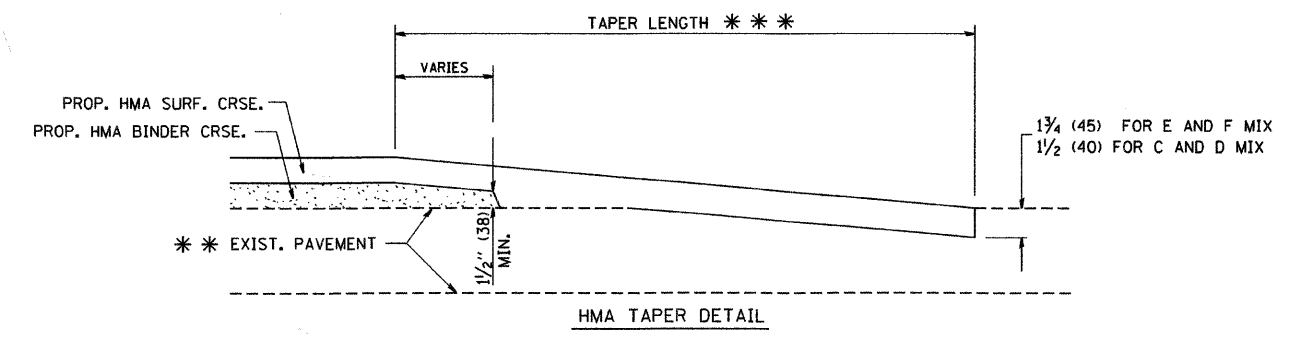
OPTION 2
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER
FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

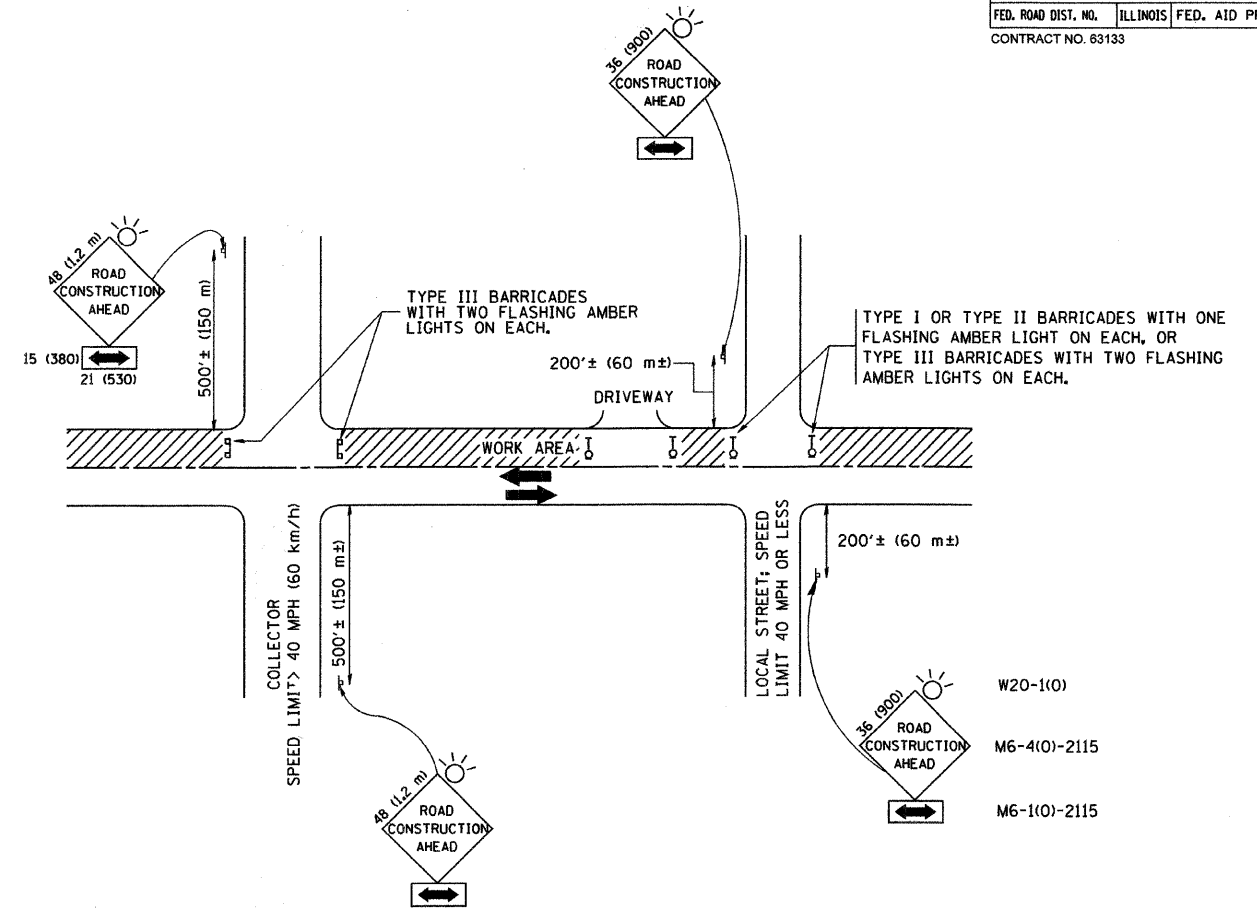
ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND
HMA TAPER
DETAILS

SCALE: VERT. NONE
HORIZ. NONE

DRAWN BY
CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3689	06-00073-00-LS	COOK	24	14
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

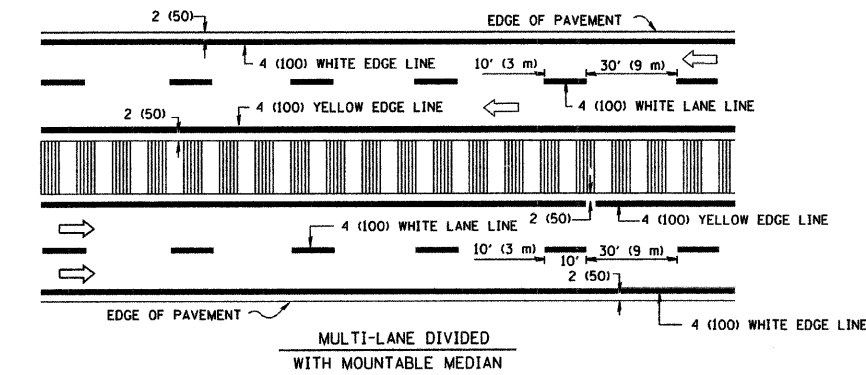
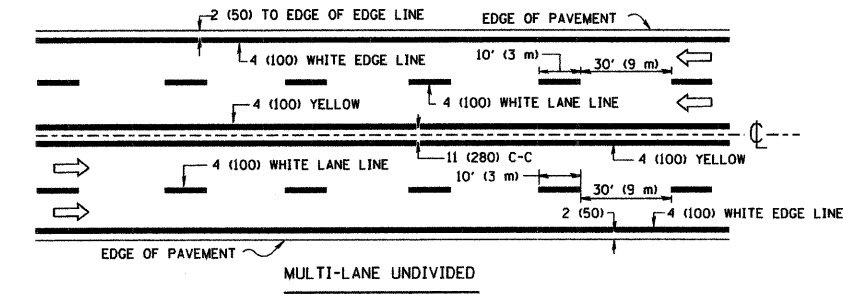
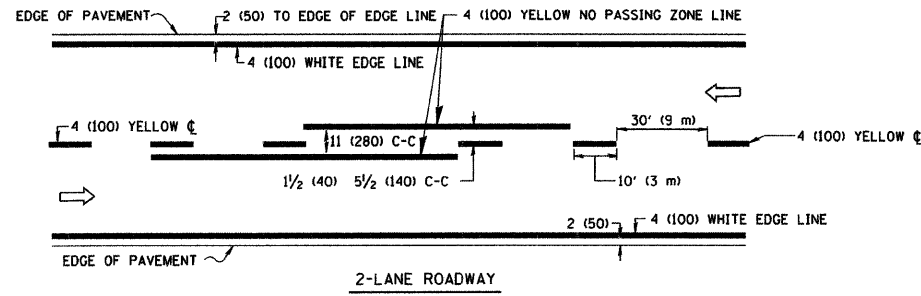
REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL AND PROTECTION
 FOR
 SIDE ROADS, INTERSECTIONS, AND
 DRIVEWAYS

SCALE: NONE

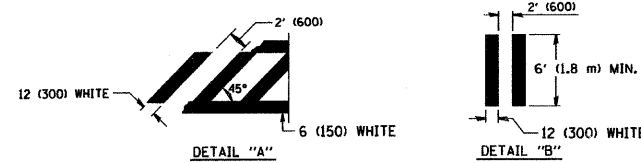
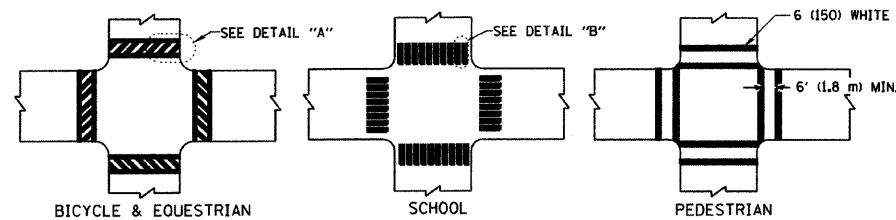
DRAWN BY
 CHECKED BY
 TC-10

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3589	06-00073-00-LS	COOK	24	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 63133				

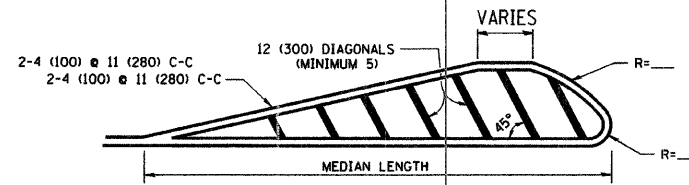
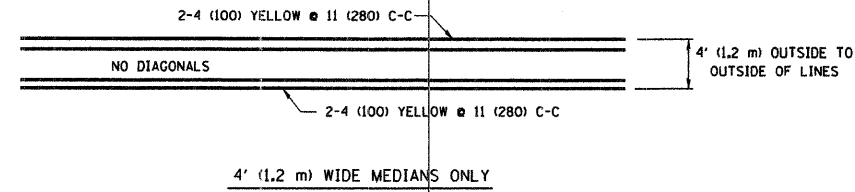


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

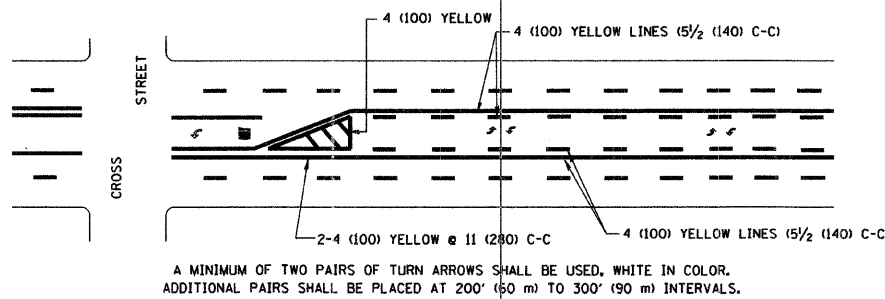


TYPICAL CROSSWALK MARKING



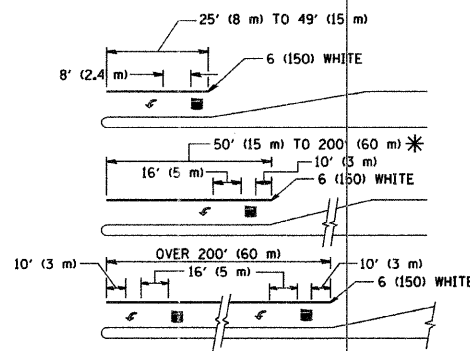
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

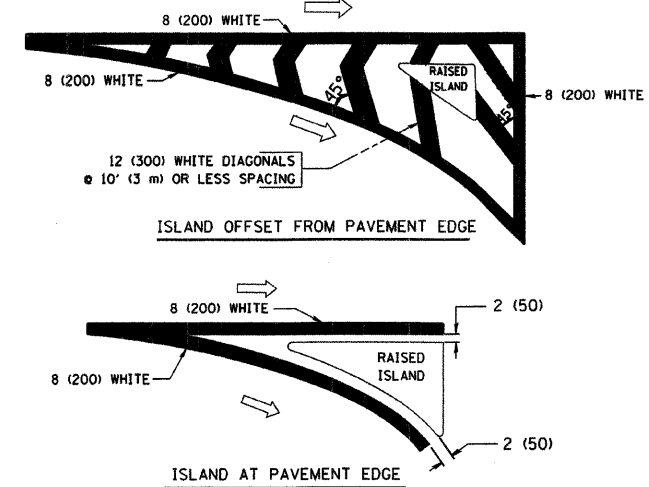


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW. EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKES & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
EVERS	03-19-94
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT ONE
 TYPICAL PAVEMENT MARKINGS

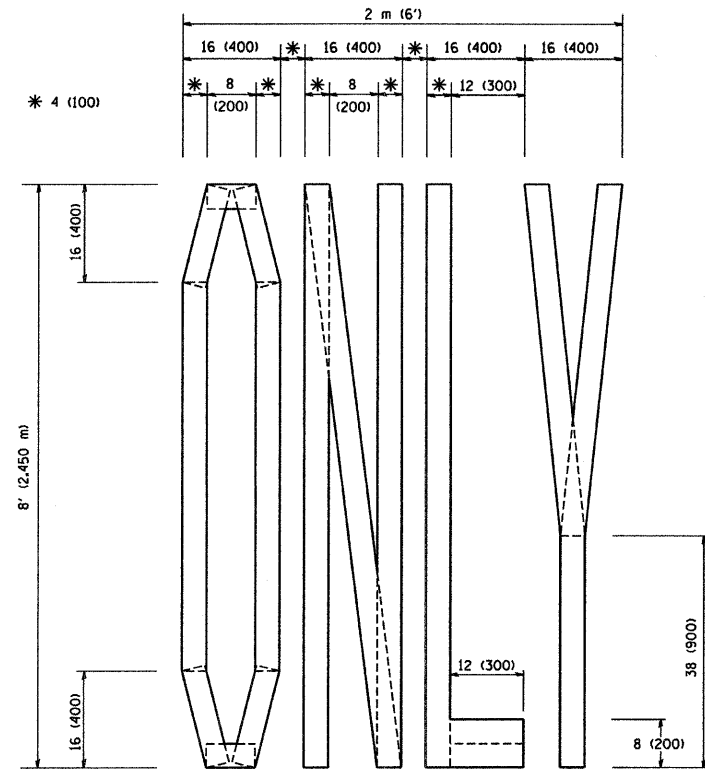
SCALE: NONE

DRAWN BY CADD

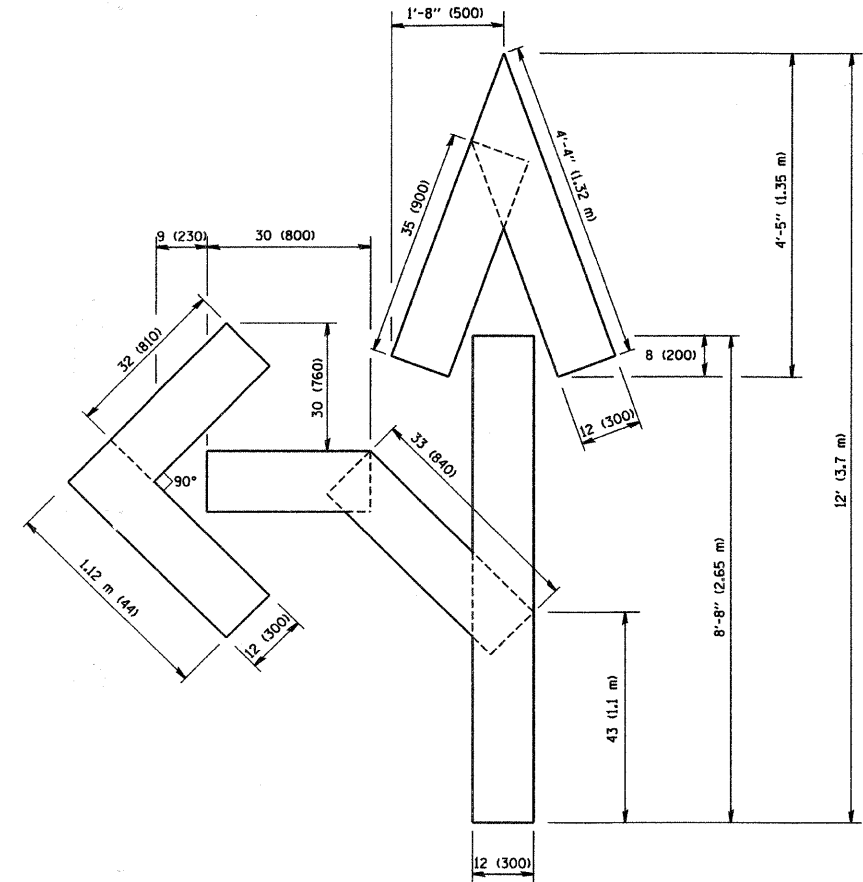
CHECKED BY

TC-13

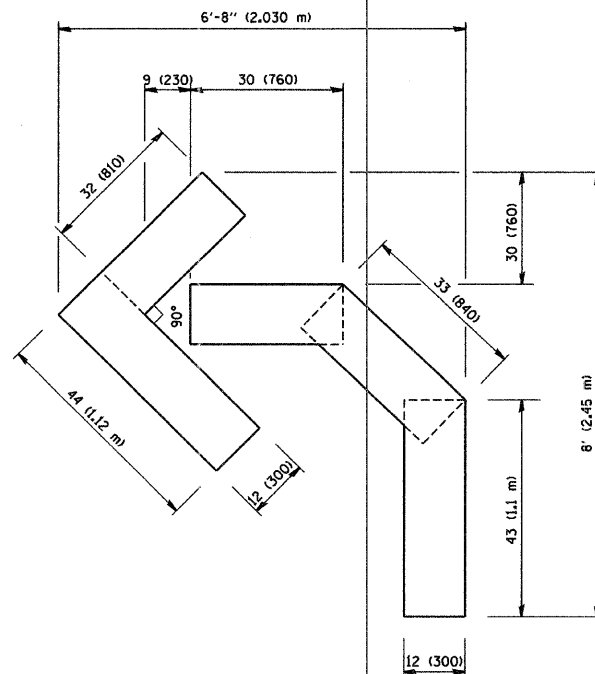
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3589	06-00073-00-LS	COOK	24	16
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING
LETTERS AND SYMBOLS
FOR TRAFFIC STAGING

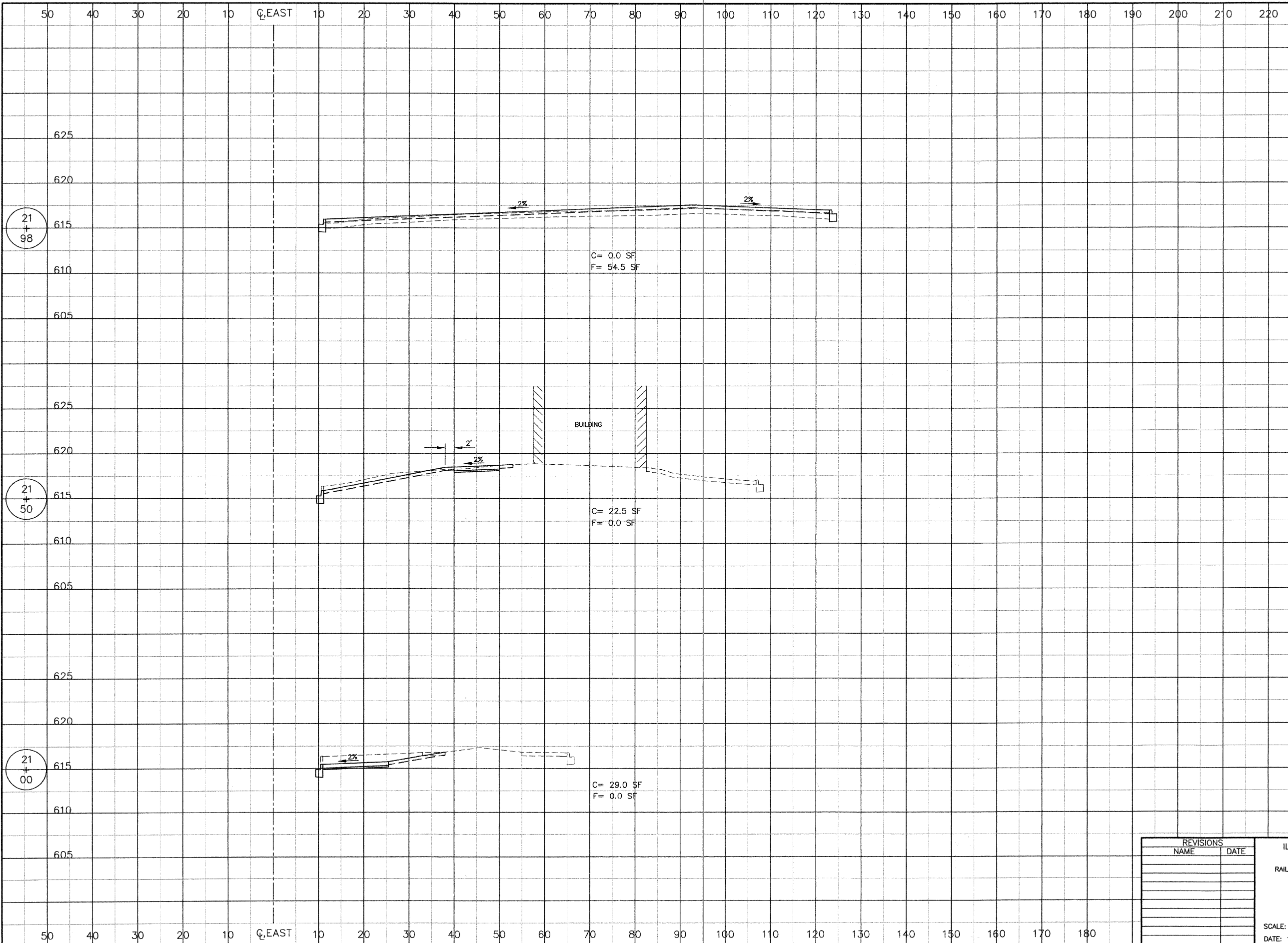
SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-16

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA. 21+00		TO STA. 21+98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				



C= 0.0 SF
F= 54.5 SF

BUILDING

C= 22.5 SF
F= 0.0 SF

C= 29.0 SF
F= 0.0 SF

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

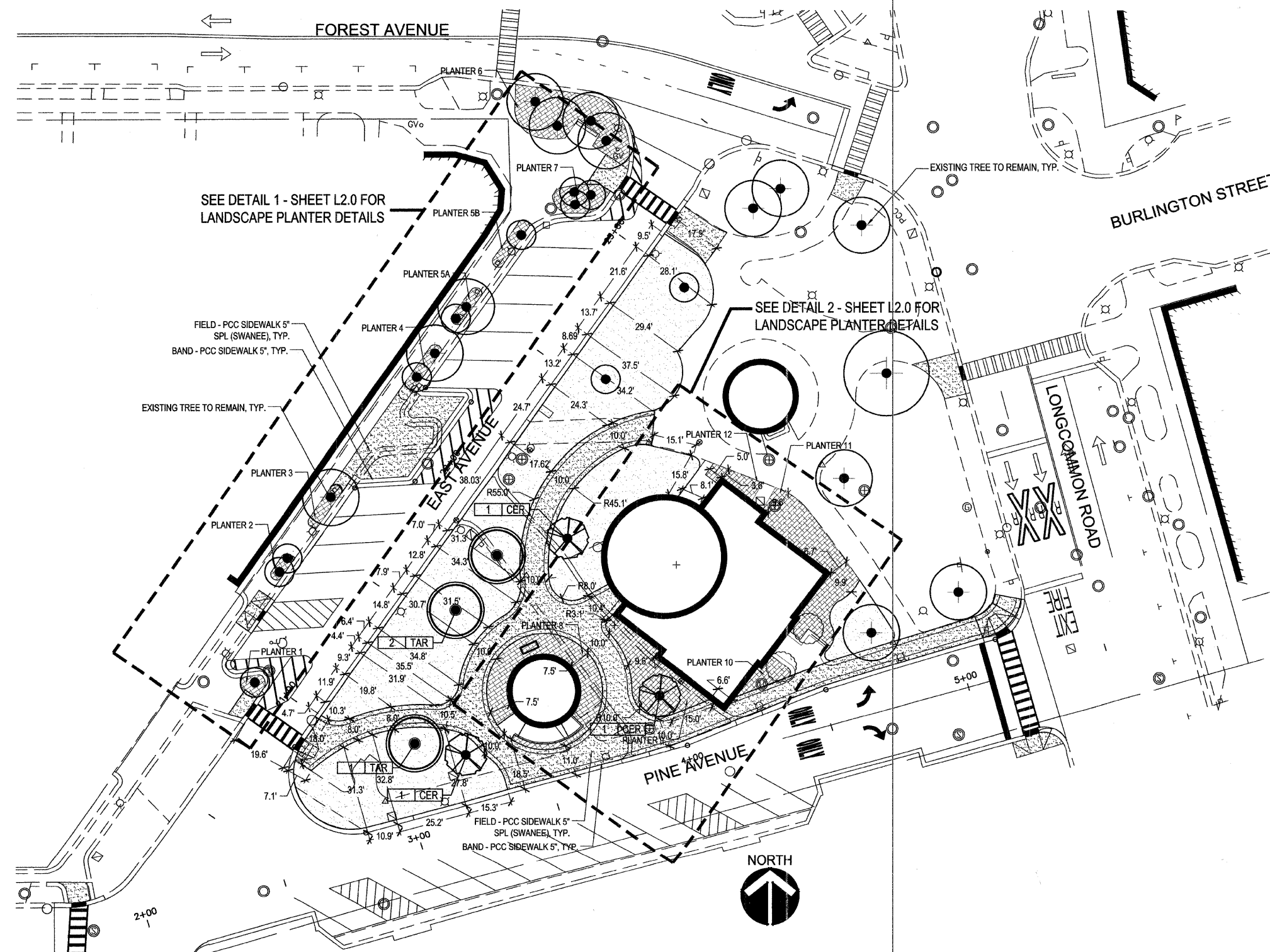
CONSTRUCTION DETAILS

SCALE: NTS
DATE: 12/01/08

DRAWN BY SMP
CHECKED BY BDH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4724 3569	06-00073-00-LS	COOK	24	18
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				

L-1.0



SEE DETAIL 1 - SHEET L2.0 FOR LANDSCAPE PLANTER DETAILS

SEE DETAIL 2 - SHEET L2.0 FOR LANDSCAPE PLANTER DETAILS

1 WATER TOWER CAMPUS SITE PLAN

SCALE: 1" = 20'-0"

Diane Legge Kemp
 Diane Legge Kemp, Principal
 DLK Civic Design
 410 South Michigan Avenue
 Chicago, Illinois 60605
 ph: 312.322.0911

#157-006898
 001-009224
 exp. 8/31/09

DIANE LEGGE KEMP
 LICENSED ARCHITECT
 STATE OF ILLINOIS

FOR SHEETS L-1.0 THROUGH L-3.0
 AND A-1.0 THROUGH A-2.0

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 Civic Design
 The Fine Arts Building
 410 South Michigan Avenue
 Chicago, Illinois 60605
 Tel. 312.322.0911
 Fax 312.322.5324
 www.dlkc.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAU ROUTES 1472 & 3569
 VILLAGE OF RIVERSIDE
 RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

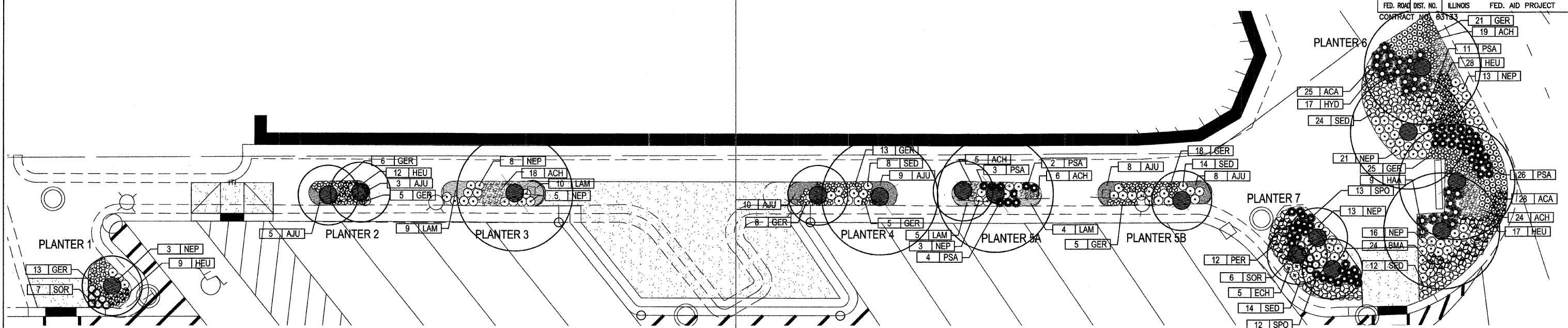
LANDSCAPE SITE PLAN

SCALE: 1"=20'-0"
 DATE: 03-27-2009

DRAWN BY: SM
 CHECKED BY: JE

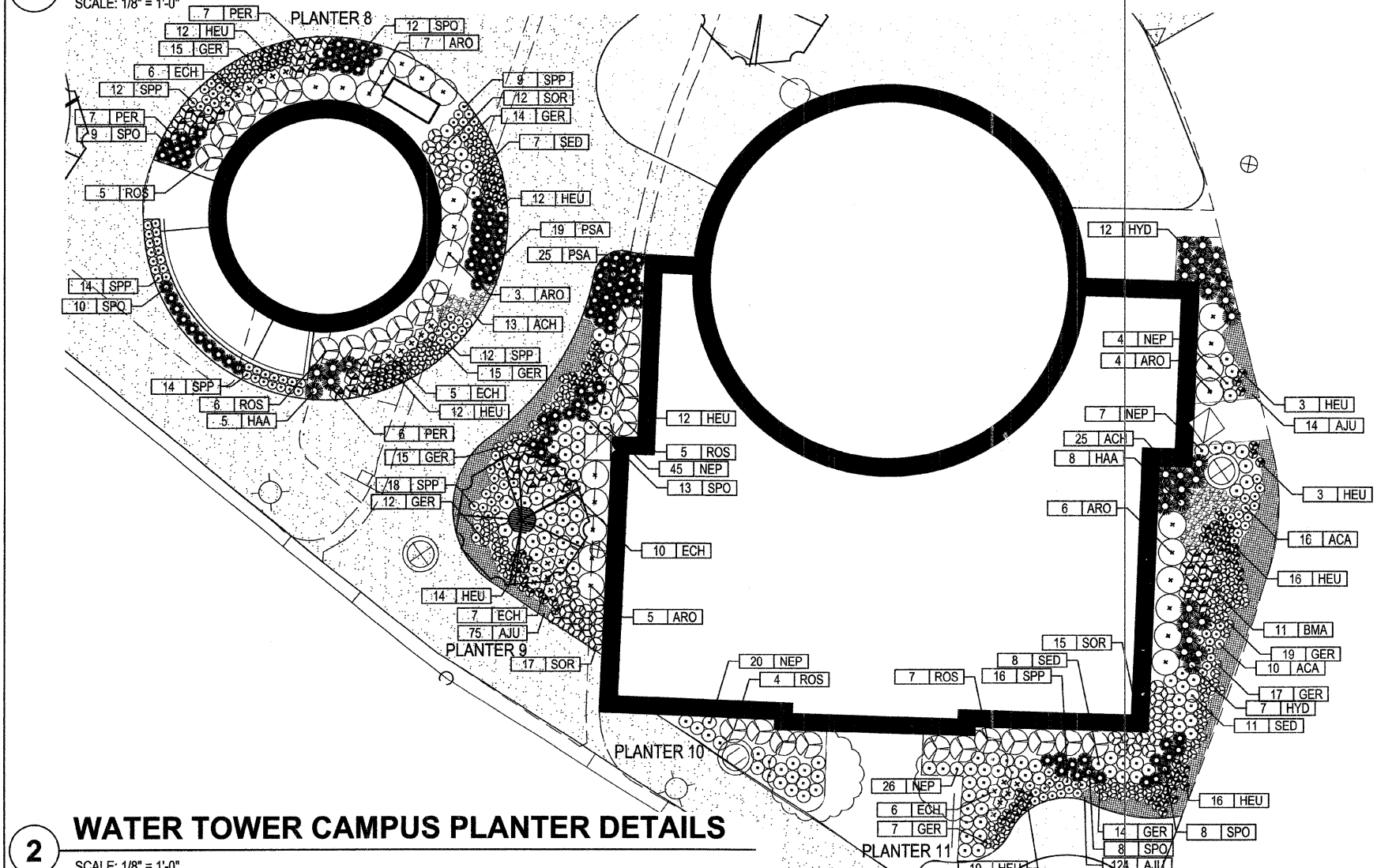
L-2.0

FAU. RTE. 472 & 3569	SECTION 06-00073-00-LS	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 19
STA. 3683	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83TS3				



1 EAST AVENUE SIDEWALK PLANTER DETAILS

SCALE: 1/8" = 1'-0"



2 WATER TOWER CAMPUS PLANTER DETAILS

SCALE: 1/8" = 1'-0"

MASTER SCHEDULE OF PLANTS

Village of Riverside Railway / Water Tower Campus Restoration

Key	Botanical Name	Common Name	Size	Spacing	TOTALS
SHADE TREES					
TAR	<i>Tilia americana</i> 'Redmond'	American Linden	4" cal.	on plans	3
ORNAMENTAL TREES					
CER	<i>Cercis canadensis</i>	Eastern Redbud	8-foot ht.	on plans	3
SHRUBS					
ARO	<i>Aronia melanocarpa</i> 'Iroquois Beauty'	Black Chokeberry	24" B/B	Plant at 36" o.c.	25
ROS	<i>Rosa Radcon</i>	Pink Knockout Rose	24" B/B	Plant at 36" o.c.	27
PERENNIALS AND ORNAMENTAL GRASSES					
ACH	<i>Astilbe chinensis</i> 'Maggie Daley'	Chinese astilbe	1 Gal. pot	Plant at 12" o.c.	113
ACA	<i>Asarum canadense</i>	Wild Ginger	1 Gal. pot	Plant at 12" o.c.	79
AJU	<i>Ajuga reptans</i> 'Bronze Beauty'	Ajuga	1 Qt. pot	Plant at 12" o.c.	256
BMA	<i>Brunnera macrophylla</i>	False Forget-me-not	1 Qt. pot	Plant at 12" o.c.	32
ECH	<i>Echinacea purpurea</i> 'Magnus'	Purple Coneflower	1 Gal. pot	Plant at 18" o.c.	39
GER	<i>Geranium 'Biovivo'</i>	Wild Geranium	1 Qt. pot	Plant at 12" o.c.	246
HEU	<i>Heuchera 'Palace Purple'</i>	Coral Bells	1 Qt. pot	Plant at 12" o.c.	176
HAA	<i>Hydrangea arborescens</i> 'Annabelle'	Annabelle Hydrangea	1 Gal. pot	Plant at 24" o.c.	22
HYD	<i>Hydrangea arborescens</i> 'Oakleaf'	Oakleaf Hydrangea	1 Gal. pot	Plant at 24" o.c.	37
LAM	<i>Lamium maculatum</i>	Deadnettle	1 Qt. pot	Plant at 12" o.c.	28
NEP	<i>Nepeta 'Walkers Low'</i>	Catmint	1 Gal. pot	Plant at 18" o.c.	177
PER	<i>Perovskia atriplicifolia</i> 'Little Spire'	Russian Sage	1 Gal. pot	Plant at 18" o.c.	32
PSA	<i>Pulmonaria saccharata</i>	Lungwort	1 Gal. pot	Plant at 18" o.c.	90
SPP	<i>Salvia pratensis</i> 'Pink Dailight'	Salvia	1 Qt. pot	Plant at 12" o.c.	93
SED	<i>Sedum 'Autumn Joy'</i>	Sedum	1 Gal. pot	Plant at 18" o.c.	100
SOR	<i>Sorghastrum nutans</i> 'Sioux Blue'	Indian Grass	1 Gal. pot	Plant at 18" o.c.	57
SPO	<i>Sporobolus heterolepis</i>	Prairie Dropseed	1 Gal. pot	Plant at 18" o.c.	85



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Tel. 312.322.0911
Fax 312.322.5324
www.dlkinc.com

REVISIONS	
NAME	DATE

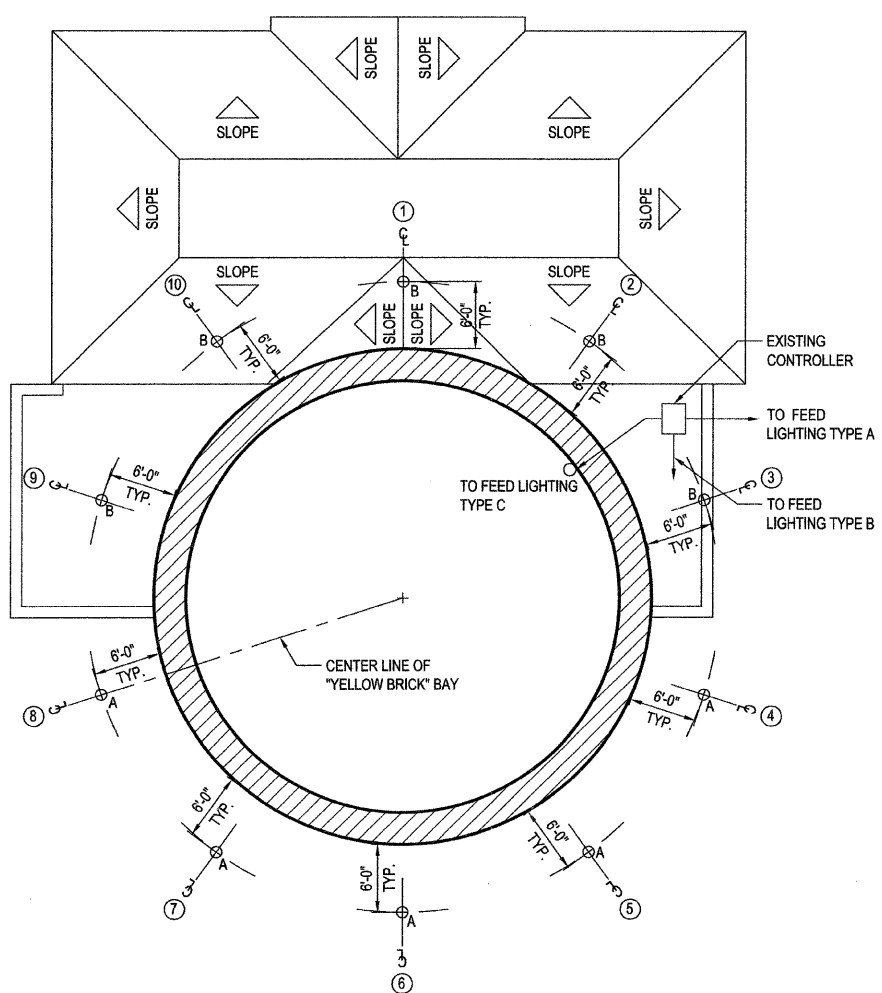
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

LANDSCAPE PLANTER DETAILS

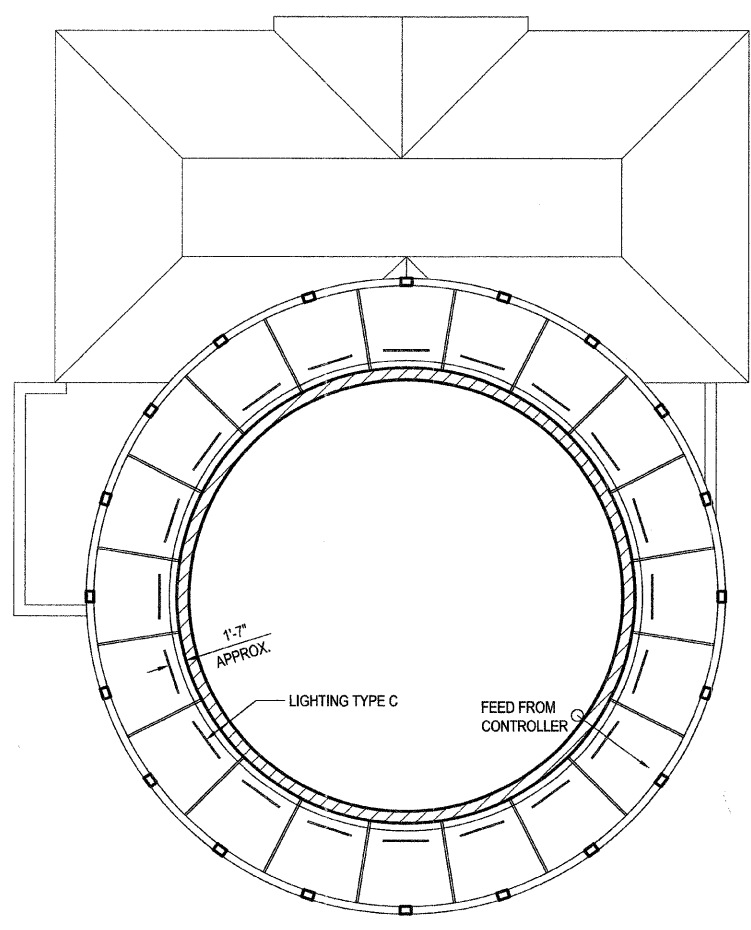
SCALE: 1/8" = 1'-0"
DATE: 03-27-2009

DRAWN BY: SM
CHECKED BY: JE

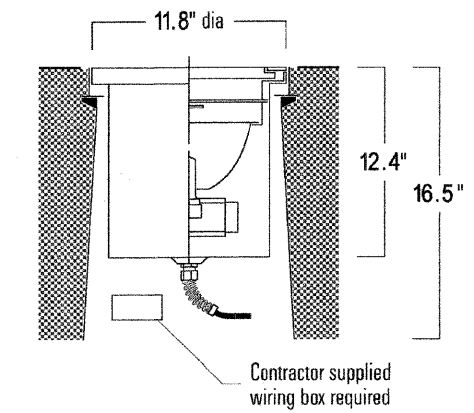
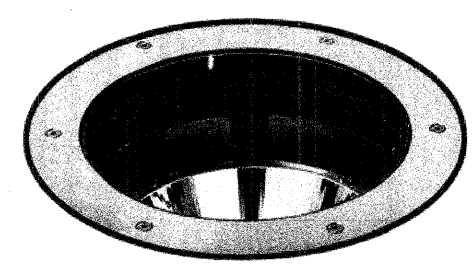
A-1.0



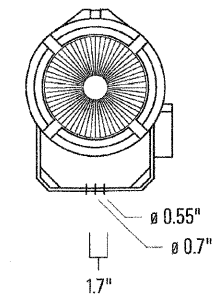
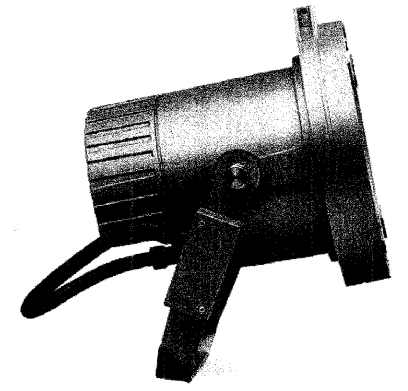
A1 FIRST FLOOR LIGHTING PLAN
SCALE: 1/8" = 1'-0"



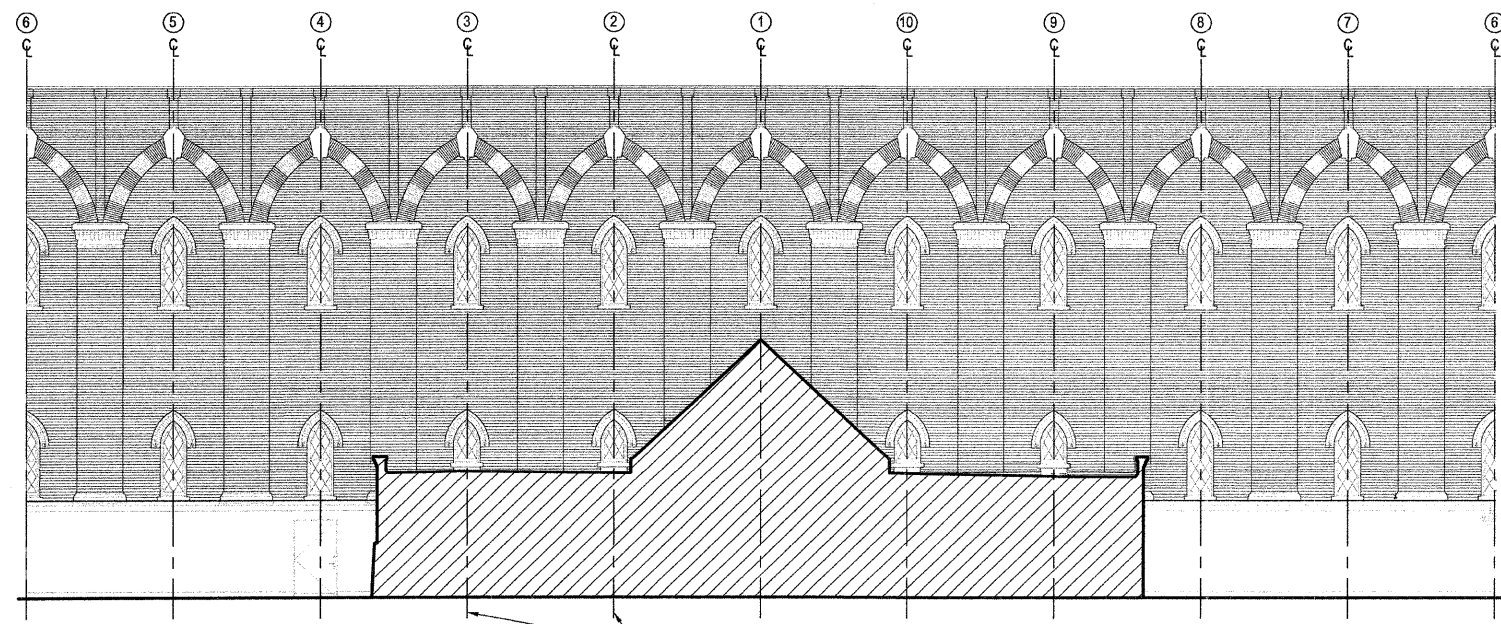
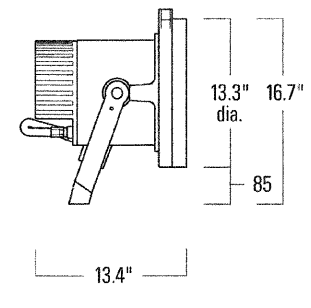
A2 BALCONY LIGHTING PLAN
SCALE: 1/4" = 1'-0"



A LIGHTING TYPE A
SCALE: NTS



B LIGHTING TYPE B
SCALE: NTS



A3 ELEVATION
SCALE: 1/8" = 1'-0"



C LIGHTING TYPE C
SCALE: NTS

GENERAL NOTES:

- ALL LIGHTING FIXTURES TO BE INSTALLED BY MANUFACTURER'S SPECIAL PROVISIONS AND INSTALLATION INSTRUCTIONS
- IN-GROUND FIXTURES TO BE INSTALLED AND POSITIONED EXACTLY AS SHOWN ON THE PLAN (FOR LIGHTING ACCURACY & UNIFORMITY)

BILL OF MATERIALS			
LIGHT FIXTURE SCHEDULE			
LIGHT	QUANTITY	TYPE	PRODUCT
A	5	GROUND	WE-EF ARCHITECTURAL LIGHTING INGROUND UPLIGHT - ETC140 [VN]
B	5	ROOF	WE-EF ARCHITECTURAL LIGHTING FLOODLIGHT/SYMETRIC - FLC250 [VN]
C	20	48" LED	ILLUM/VISION HILGHLITE NEUTRAL HL-4-W41

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www.dlkinc.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

ARCHITECTURAL LIGHTING LAYOUT

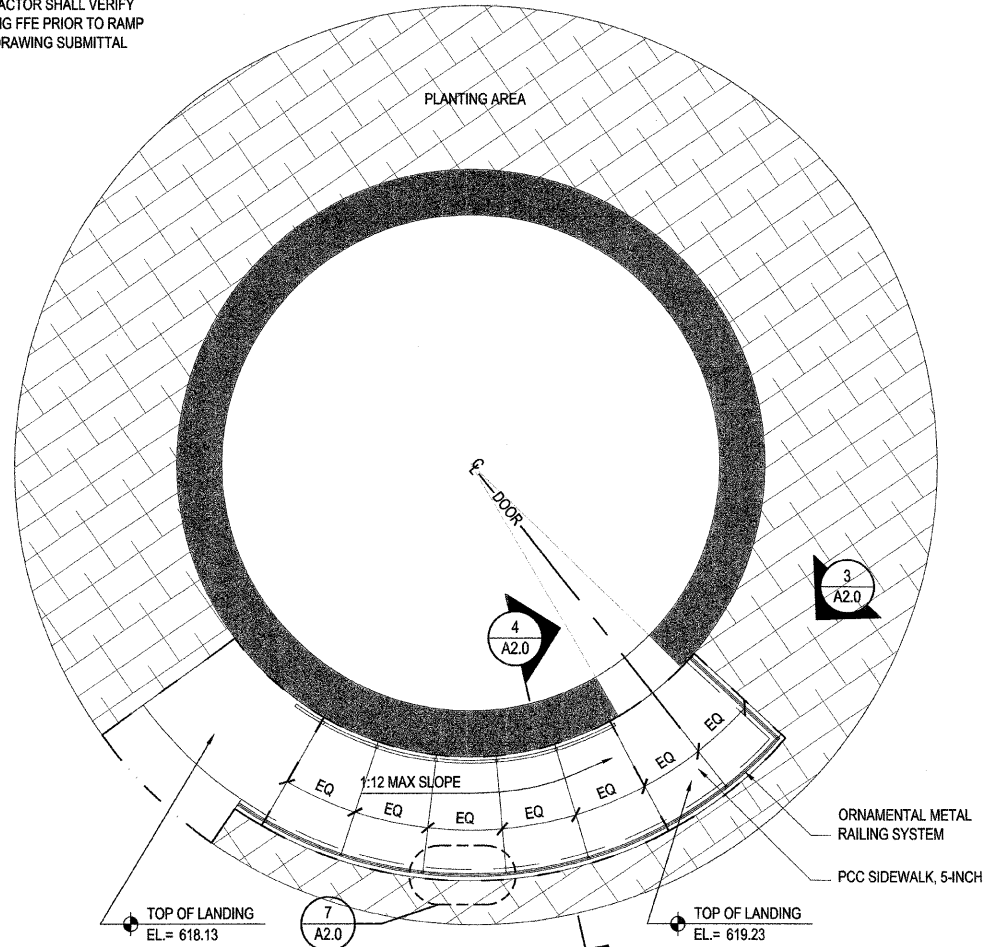
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DATE: 12-05-2008

DRAWN BY: EB
CHECKED BY: AT

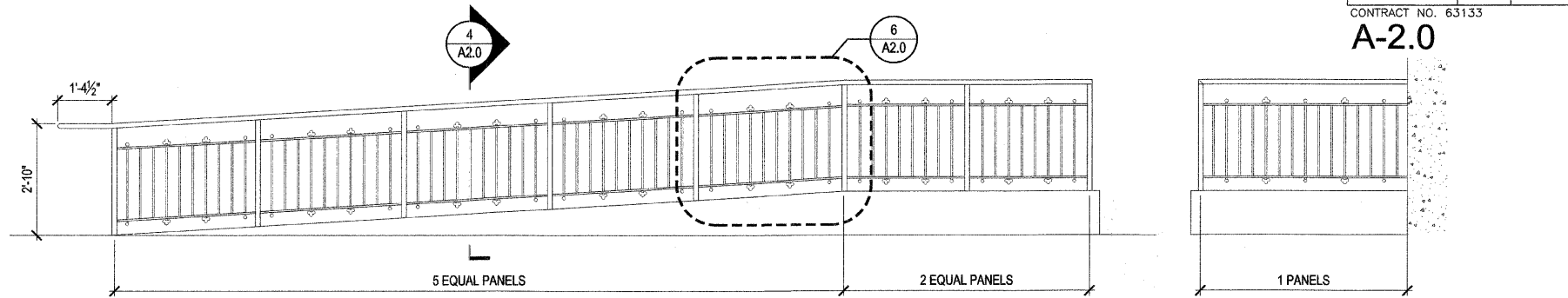
NOTE:
CONTRACTOR SHALL VERIFY
BUILDING FFE PRIOR TO RAMP
SHOP DRAWING SUBMITTAL

F.A.U. RTE. 477 3369	SECTION 06-00073-00-LS	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 22
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
CONTRACT NO. 63133				

A-2.0

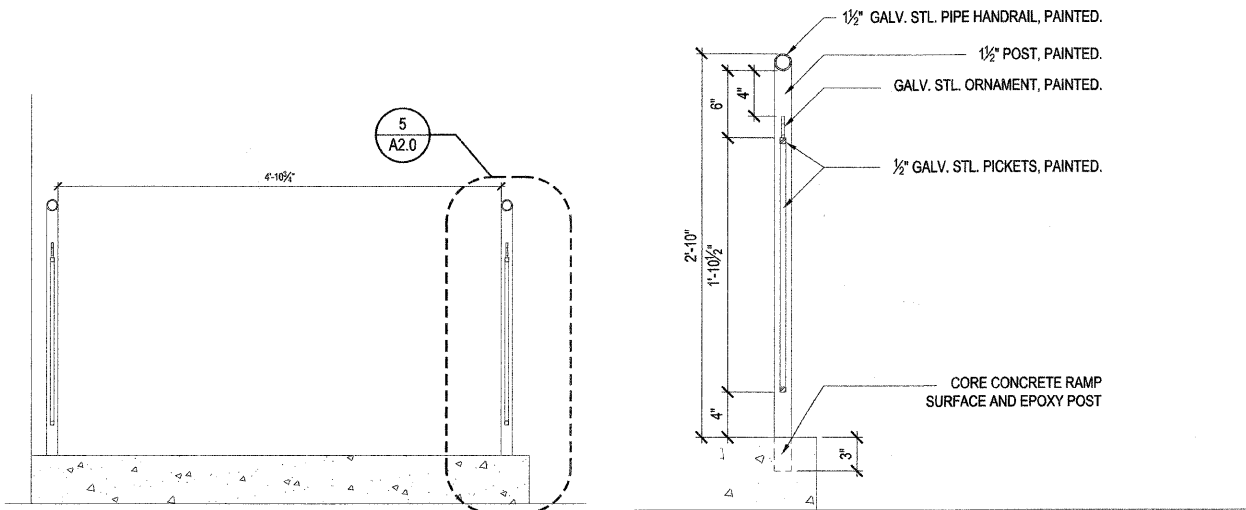


1 RAMP PLAN
SCALE: 1/4" = 1'-0"



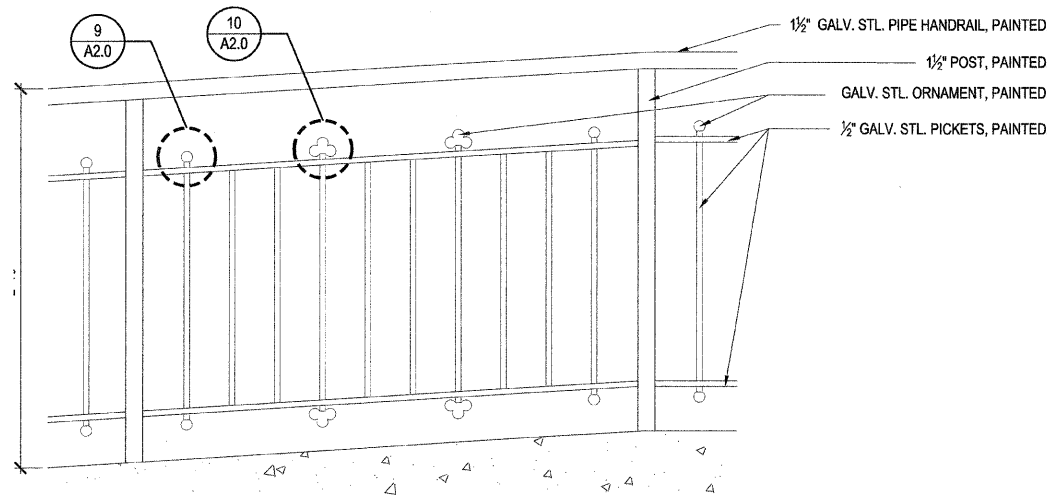
2 DEVELOPED RAMP ELEVATION
SCALE: 1/2" = 1'-0"

3 DEVELOPED RAMP ELEVATION
SCALE: 1/2" = 1'-0"

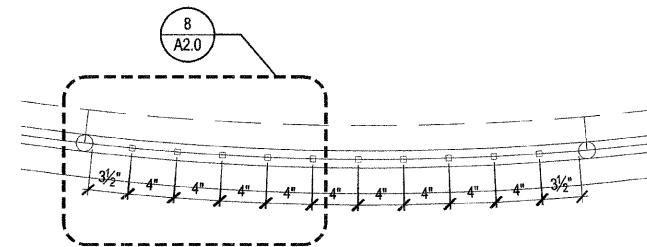


4 RAMP SECTION
SCALE: 1" = 1'-0"

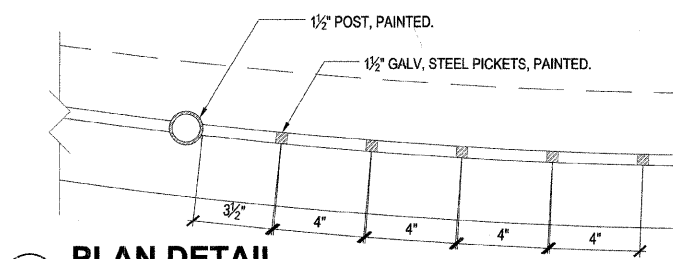
5 RAMP DETAIL
SCALE: 1-1/2" = 1'-0"



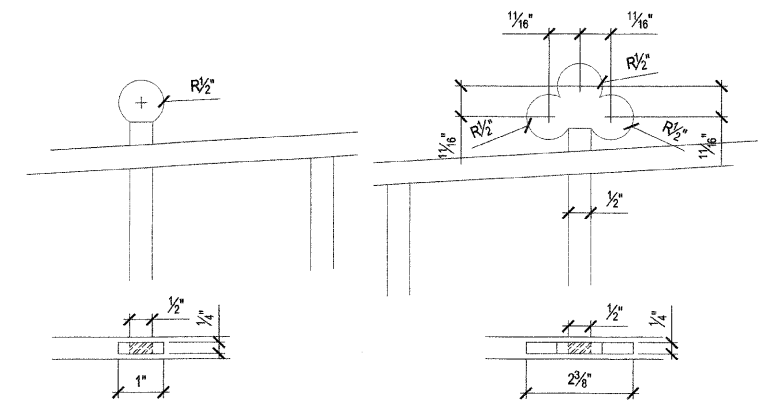
6 ENLARGED ELEVATION
SCALE: 1-1/2" = 1'-0"



7 ENLARGED PLAN
SCALE: 1-1/2" = 1'-0"



8 PLAN DETAIL
SCALE: 3" = 1'-0"



9 CIRCLE ORNAMENT
SCALE: 6" = 1'-0"

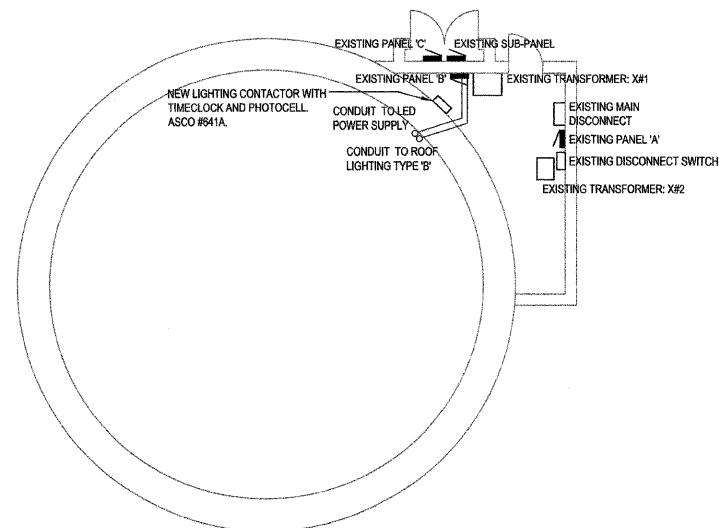
10 CLOVER ORNAMENT
SCALE: 6" = 1'-0"

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The Fine Arts Building
410 South Michigan Avenue
Chicago, Illinois 60605
Tel. 312.322.0911
Fax 312.322.5324
www.dlkcinc.com

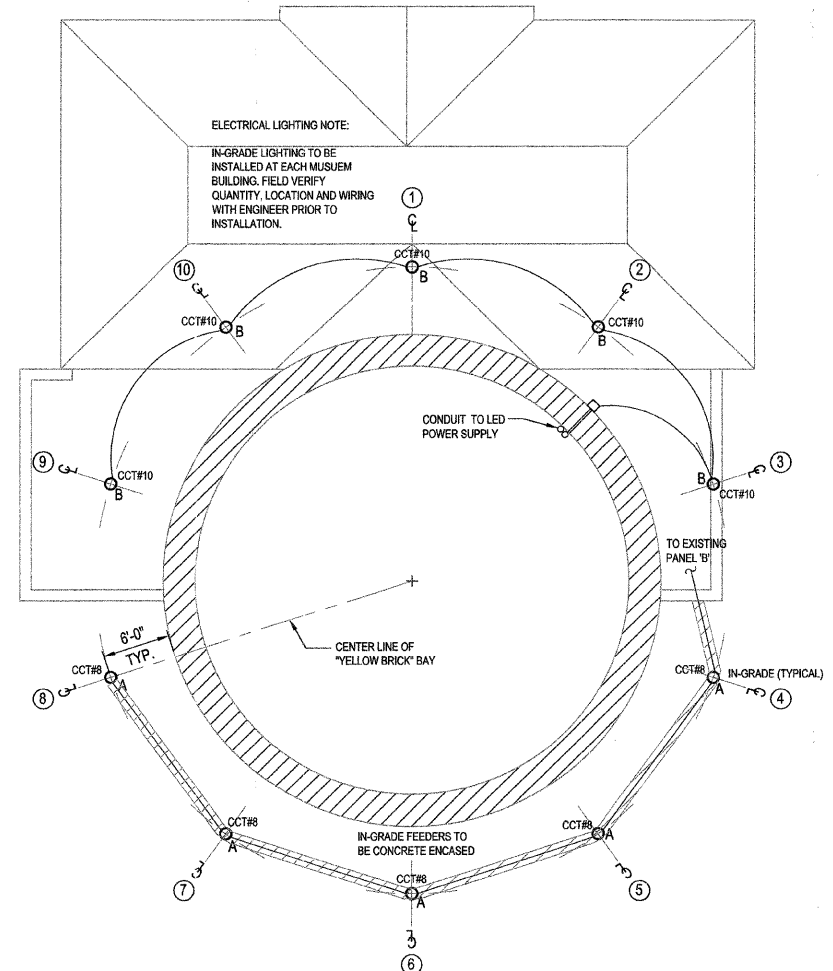
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT
ARCHITECTURAL RAMP DRAWINGS
SCALE: VARIES
DATE: 12-05-2008
DRAWN BY: EB
CHECKED BY: JE

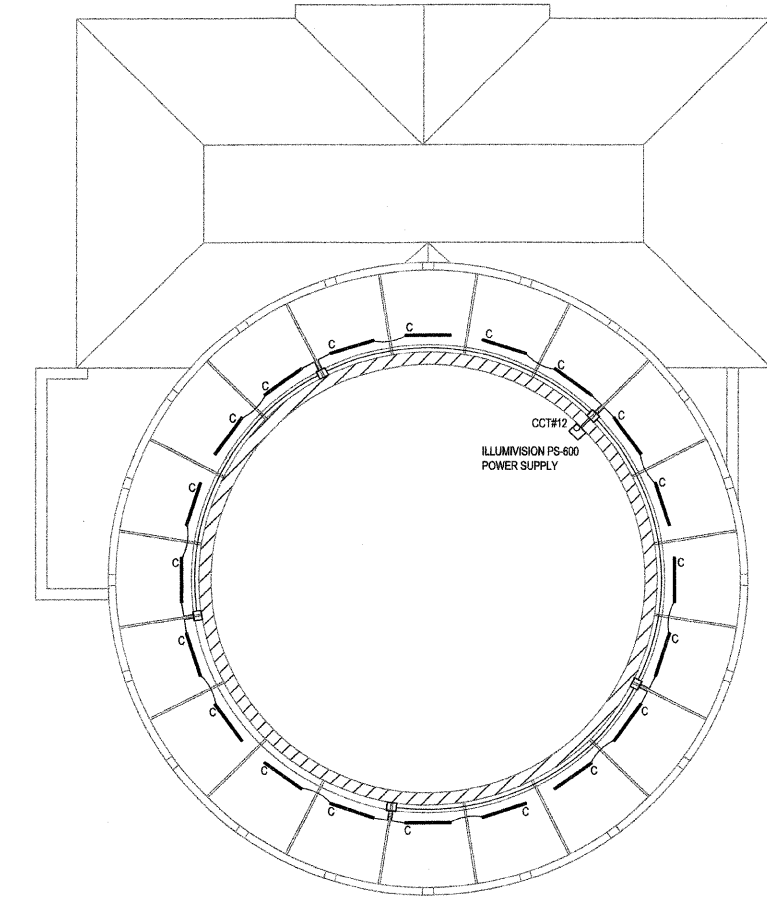
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472 & 3569	06-00073-00-LS	COOK	24	23
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				



E1 ELECTRICAL CLOSET PLAN
SCALE: 1/4" = 1'-0"



E2 FIRST FLOOR LIGHTING PLAN
SCALE: 1/8" = 1'-0"



E3 BALCONY LIGHTING PLAN
SCALE: 1/4" = 1'-0"



BES BUILDING ENGINEERING SYSTEMS, LLC
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REVISIONS	
NAME	DATE
ISSUE FOR PERMIT	02.06.09

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAU ROUTES 1472 & 3569
VILLAGE OF RIVERSIDE
RAILWAY/WATER TOWER CAMPUS RESTORATION PROJECT

ELECTRICAL POWER AND LIGHTING PLANS

SCALE: AS NOTED
DATE: FEBRUARY 6, 2009

DRAWN BY:
CHECKED BY:

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
472 & 3569	06-00073-00-LS	COOK	24	24
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63133				

ELECTRICAL NOTES AND SPECIFICATIONS:

- ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL ELECTRICAL, BUILDING AND FIRE CODES, APPLICABLE FEDERAL AND STATE REGULATIONS.
- LAYOUT IS DIAGRAMMATIC AND CONTRACTOR SHALL INSTALL EQUIPMENT TO MEET THE FIELD CONDITIONS.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES AS REQUIRED FOR HIS PORTION OF THE WORK.
- CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE TRADES AND VERIFY LOCATIONS FROM THE ARCHITECTURAL DRAWINGS, FIELD MEASUREMENTS AND SUPPLIER SHOP DRAWINGS.
- CONTRACTOR SHALL VISIT SITE TO DETERMINE THE FULL EXTENT OF THE WORK AND FACILITY LOCATIONS AND VERIFY WITH THE LOCAL GOVERNING BODIES.
- CONTRACTOR SHALL FURNISH SHOP DRAWING ON ALL EQUIPMENT AND FIXTURES TO ENGINEER FOR REVIEW; QUANTITY AS PER GENERAL PROVISIONS.
- CONTRACTOR SHALL FURNISH ONE SET OF AS-BUILTS TO ENGINEER OF ALL CONTRACT WORK.
- CONTRACTOR SHALL CHECK ALL DRAWINGS AND SPECIFICATIONS OF OTHER TRADES AND INCLUDE IN HIS BID ANY ADDITIONAL WORK REQUIRED BY THIS TRADE.
- ALL EXISTING CONDITIONS MUST BE VERIFIED AT THE PROJECT SITE BY THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO MAKE ANY AND ALL PROVISIONS NECESSARY TO ADAPT THE NEW WORK TO EXISTING CONDITIONS. ALL SUCH ADAPTATION MUST BE REVIEWED BY THE ENGINEER AND MUST BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL AVOID ALL STRUCTURAL SUPPORT MEMBERS. RELOCATE EQUIPMENT AS NECESSITATED BY FIELD CONDITIONS, FROM WHERE SHOWN ON DRAWINGS. CUTTING SHALL ONLY BE DONE AFTER OBTAINING ARCHITECT'S REVIEW.
- THE CONTRACTOR SHALL PROTECT THE EXISTING FACILITY AND SHALL EXERCISE CARE NOT TO DAMAGE ANY EXISTING CONSTRUCTION TO REMAIN. ALL WORK DAMAGED BY THE CONTRACTOR MUST BE RESTORED SO AS TO MATCH EXISTING ADJACENT SURFACES IN ALL RESPECTS AND AS APPROVED BY THE ARCHITECT. ANY SUCH CORRECTIVE WORK MUST BE PERFORMED AT NO ADDITIONAL COST. ALL CORING AND ELECTRICAL WORK DONE AT FLOOR OR FLOOR BELOW SHALL BE AFTER HOURS AND ON OVERTIME BASIS.
- THE CONTRACTOR SHALL VERIFY THE CONDITION OF EXISTING ELECTRICAL PANELS AND NUMBER OF SPARES AND SPACES. HE SHALL PROVIDE AND INSTALL OVERCURRENT DEVICES AS REQUIRED TO CONTROL NEW CIRCUITRY.
- THE CONTRACTOR SHALL MAINTAIN THE ELECTRICAL CONTINUITY OF ELECTRICAL CIRCUITS, EQUIPMENT, AND DEVICES TO REMAIN. HE SHALL REWORK AND RE-CIRCUIT AS NECESSARY TO INSURE THE PROPER FUNCTIONING OF REMAINING CIRCUITS, EQUIPMENT AND DEVICES.
- CIRCUIT NUMBERS GIVEN ON DRAWINGS ARE FOR CIRCUIT IDENTIFICATION ONLY. THE CONTRACTOR SHALL INSTALL CIRCUITRY AS GOVERNED BY FIELD CONDITIONS. HE SHALL KEEP A TYPED RECORD CORRELATING GIVEN AND ACTUAL CIRCUIT NUMBERS AND RECORD THIS INFORMATION ON THE PANEL DIRECTORIES.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE OTHER CONTRACTORS AND WITH THE EXISTING JOB SITE CONDITIONS. HE SHALL RELOCATE EQUIPMENT AS REQUIRED TO AVOID CONFLICT WITH OTHER TRADES. ALL DEVIATIONS SHALL BE APPROVED BY THE ENGINEER BEFORE EXECUTION OF WORK.
- OUTAGES OF EXISTING ELECTRICAL SYSTEMS NECESSITATED BY THE NEW CONSTRUCTION WORK OF ALL TRADES SHALL BE IN ACCORDANCE WITH A SCHEDULE ISSUED IN THE FIELD BY THE LANDLORD & BLDG. ENGINEER. INCLUDE ALL ELECTRIC WORK, OVERTIME LABOR AND SUPERVISION NECESSARY TO ADHERE TO THIS SCHEDULE.
- ANY EXISTING ELECTRICAL WORK WHICH IS PULLED OUT OR CUT AWAY SHALL BE REMOVED FROM THE SITE AS IF IT WERE RUBBISH. PROPER CREDIT SHALL BE GIVEN FOR ALL SALVAGEABLE ITEMS.
- RACEWAYS SHALL BE MINIMUM 3/4" EMT FOR LIGHTING AND APPLIANCE BRANCH CIRCUITRY AND MINIMUM 3/4" EMT FOR TELEPHONE.
- CONDUCTORS SHALL BE COPPER, MINIMUM #12 A.W.G., WITH TYPE THWN INSULATION.
- RACEWAY FITTINGS SHALL BE GALVANIZED STEEL, CODE APPROVED TYPE.
- ALL BRANCH CIRCUITS SHALL BE GROUPED INTO PHASE BALANCED MULTIPLE CIRCUIT HOMERUNS. A MAXIMUM OF 6 CIRCUITS PER SINGLE HOMERUN.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE CONDUCTOR AND RACEWAY SYSTEM FOR ALL CIRCUIT DEVICES INDICATED ON THE PLANS EVEN THOUGH NOT DELINEATED.
- WIRES FOR BRANCH CIRCUITS THAT EXCEED 100' IN LENGTH FROM PANEL TO CENTER OF LOAD SHALL NOT BE SMALLER THAN #10 AWG.
- INSTALLATION OF ALL LIGHTING FIXTURES SHALL INCLUDE ALL NECESSARY CONDUIT (SOLID OR FLEXIBLE), WIRING, JUNCTION BOXES, ETC., FOR CIRCUIT DEVICES.
- ALL ELECTRICAL EQUIPMENT AND INSTALLATION ABOVE THE CEILING SHALL BE APPROVED FOR PLENUM CONDITIONS AS REQUIRED BY APPLICABLE GOVERNING AUTHORITY.
- ALL CIRCUITRY TO BE RUN CONCEALED UNLESS OTHERWISE INDICATED.
- MATERIAL AND EQUIPMENT SHALL MATCH BUILDING STANDARD UNLESS NOTED OTHERWISE.

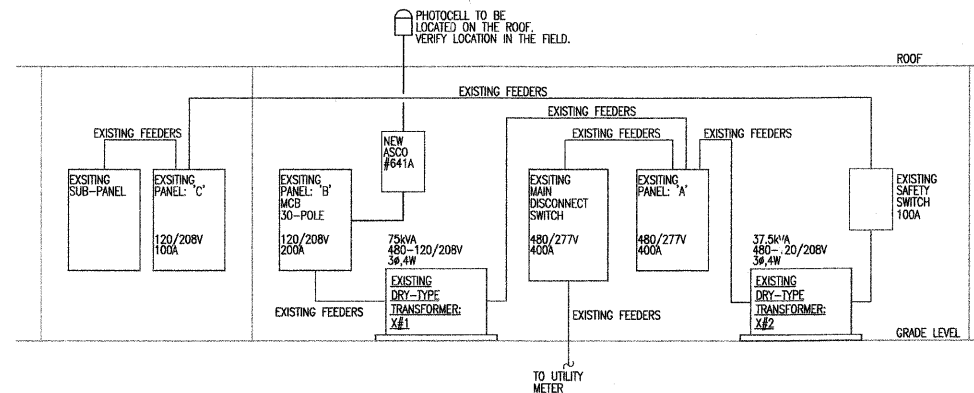
VOLTAGE DROP CALCULATIONS

BRANCH LIGHTING TYPE 'A'	BRANCH LIGHTING TYPE 'B'	BRANCH LIGHTING TYPE 'C'
RUN LENGTH: 99FT CABLE SIZE: 12AWG AMPACITY SEVER: 146A CURRENT RESISTANCE: 2.0 120V 1φ CONNECTION	RUN LENGTH: 89FT CABLE SIZE: 12AWG AMPACITY SEVER: 146A CURRENT RESISTANCE: 2.0 120V 1φ CONNECTION	RUN OVER 100FT TO MAX: 110FT CABLE SIZE: 10AWG AMPACITY SEVER: 145A CURRENT RESISTANCE: 1.2 120V 1φ CONNECTION
$V(d) = \text{RESISTANCE} \times (\text{LENGTH}/1000) \times \text{AMPACITY}$ $= 2.0(99/1000) \times 1.46$ $= 0.289V$ $\%V(d) = (V(d)/120V) \times 100$ $= (0.289/120) \times 100$ $= 0.241\%$	$V(d) = \text{RESISTANCE} \times (\text{LENGTH}/1000) \times \text{AMPACITY}$ $= 2.0(89/1000) \times 1.46$ $= 0.257V$ $\%V(d) = (V(d)/120V) \times 100$ $= (0.257/120) \times 100$ $= 0.214\%$	$V(d) = \text{RESISTANCE} \times (\text{LENGTH}/1000) \times \text{AMPACITY}$ $= 1.2(110/1000) \times 1.45$ $= 0.194V$ $\%V(d) = (V(d)/120V) \times 100$ $= (0.194/120) \times 100$ $= 0.162\%$

CONDUCTORS FOR BRANCH CIRCUITS SHALL BE SIZED TO PREVENT A VOLTAGE DROP NOT TO EXCEED 3% AT THE FARTHEST LOAD PER VILLAGE OF RIVERSIDE AND NEC CODE SECTION 210.19.

CONDUCTORS FOR FEEDERS SHALL BE SIZED TO PREVENT A VOLTAGE DROP NOT TO EXCEED 3% AT THE FARTHEST LOAD PER VILLAGE OF RIVERSIDE AND NEC CODE SECTION 215.2.

ALL FEEDERS GREATER THAN 100' IN LENGTH SHALL BE SIZED ONE GAGE LARGER TO COMPLY WITH THIS SECTION.



RIVERSIDE TOWER-RISER DIAGRAM

SCALE: N.T.S.

PANEL DESIGNATION: 'B'													
SERVICE: 120/208 VOLTS, 3 φ, 4 WIRES					<input type="checkbox"/> M.L.O.								
BUS SIZE: 200 AMPS					<input type="checkbox"/> MAIN O.C. DEVICE - SIZE: 200 AMPS								
LOCATION: ELECTRIC CLOSET					<input type="checkbox"/> GND BUS <input type="checkbox"/> ISO GND BUS								
CCT#	AMPS	PHASE A	PHASE B	PHASE C	AMPS	REMARKS	CCT#	AMPS	PHASE A	PHASE B	PHASE C	AMPS	REMARKS
1	100/3	9600	1080		20/1	REC- ELECTRICAL ROOM	2						
3			9600	600	20/1	LIGHTING CONTROLLER	4						
5				9600	0	20/1	EXISTING	6					
7		3840	175		20/1	LITG- FIXTURE TYPE 'A'	8						
9	40/3		3840	175	20/1	LITG- FIXTURE TYPE 'B'	10						
11				3840	540	20/1	LITG- FIXTURE TYPE 'C'	12					
13	20/1	0	0		20/1	EXISTING	14						
15	20/1			0	0	20/1	EXISTING	16					
17	20/1				0	20/1	EXISTING	18					
19	20/1	0	0		20/1	EXISTING	20						
21	20/1			0	0	20/1	EXISTING	22					
23	20/1				0	20/1	EXISTING	24					
25	20/1	0	0		20/1	EXISTING	26						
27	20/1			0	0	20/1	EXISTING	28					
29	20/1				0	20/1	EXISTING	30					
TOTAL VA PER PHASE		14,695	14,215	13,980	TOTAL VA THIS PANEL		42,890						
TOTAL PANEL LOAD: 42.9 kVA, 119.1 AMPS													



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