WILDWOOD

March 15, 2016

MEMORANDUM

To: Planning/Economic Development/Parks Committee Members

From: Department of Planning and Parks

Re: **Al Foster Memorial Trailhead Project – Bidding Results**

Cc: The Honorable Timothy Woerther, Mayor
Administration/Public Works Committee Members of the City of Wildwood
Ryan S. Thomas, P.E., City Administrator
Rob Golterman, City Attorney
Rick Brown, P.E. and P.T.O.E., Director of Public Works
Kathy Arnett, Assistant Director of Planning and Parks
Gary Crews, Superintendent of Parks and Recreation

The Committee has been a part of the development of the design and engineering drawings for the planned improvement of the Al Foster Memorial Trailhead for many years. The Committee's role in this process began with the agreement to create a public engagement process and development review program for the trailhead's improvement that would engage the Glencoe Community and all of the City's partners in the Meramec River Valley, including its current users. This process and program that was followed is described below:

1. The planning process began with direct mailings to all residents, property owners, partners, and organizations with interest in the area asking for input about the current facility and their likes, dislikes, needs, concerns, and opportunities regarding it.
2. The input was formulated into a report used to determine the level of improvements considered on the site.
3. The report was presented at a community meeting to receive feedback upon the identified items and agreement on a list of priority improvements sought.
4. The list of prioritized improvements was presented to the Planning and Zoning Commission and City Council for their respective reviews and recommendations.
5. The agreed upon improvements was determined and the park designer was asked to formulate a plan reflecting these items upon it.
6. The plan, once completed, was circulated to all interested parties for review and comments (same groups noted in Item #1 above).
7. The received comments from this first review were presented to the community at a

meeting for input, suggestions, and changes.

8. The revised plan from these comments was then be presented to the Planning and Zoning Commission and City Council for review and direction.
9. The agreed upon plan was revised for the purposes of construction documents and specifications and this information was used for bidding purposes.
10. The bidding was completed and awarding of contracts followed, with City Council approving all required contracts.
11. The construction of improvements to the trailhead can now proceed, once the City Council authorizes contracts and all required documentation is addressed.

This process began in February 2011 and, for the most part, including reviews by all of the City's boards and commissions, along with City Council, took approximately five (5) years to complete Step #10, which is the project's current status. Through this process, from public input to the comments and additions by the City's boards and commissions, the project changed, but still respected its location in the Meramec River floodplain. Accordingly, the amount of funding set aside for this project has fluctuated over the course of time due to additions made through the lengthy review process.

Now with Step #10 underway, the final steps are ready to proceed. The bids were opened for this project on March 1, 2016 and six (6) firms responded to the advertisement. A summary of the bidding is provided below:

Bidder	Base ($)	Alt. #1 ($)	Alt. #2 ($)	Alt. #3 ($)	Alt. #4 ($)	Alt. #5 ($)	Alt. #6 ($)	Total ($)
		Overflow Parking	Overflow Parking - Landscaping	Info. Board	Site Furnishings	Disc Golf	Grated Trough	
Ideal Landscaping	514,868	67,900	9,000	14,500	16,300	16,415	9,900	648,883
Demien Construction	570,000	102,344	9,328	13,135	18,591	8,432	6,000	727,830
Gershenson Construction	601,500	91,000	15,000	14,500	16,000	13,800	16,500	768,300
Raiveri Construction	560,572	152,735	11,374	2,992	25,130	51,416	11,355	815,574
Tramar Contracting	642,000	207,000	17,200	20,000	34,000	29,500	8,000	957,700
RV Wagner	759,000	197,000	16,000	22,000	24,600	31,000	8,600	1,058,200

It is important to note that approximately $450,000.00 was anticipated for this project in the 2016 Capital Improvements Budget, as part of the overall construction line item contained in it. In considering the results of this bidding process, the Department is recommending for the Committee's consideration of the following bid:

Bidder	Base Bid ($)
Ideal Landscaping	514,868.00

Obviously, the bid amount is much greater than the amount set aside in the 2016 Capital Improvements Program Budget of four hundred fifty thousand dollars ($450,000.00). Given this

circumstance, the Department of Planning and Parks requested the park designer meet with Ideal Landscaping, the low bidder, and attempt to find cost savings in its submitted bid. The outcome of this discussion was as follows:

Item	Cost ($)
Base Bid	514,868
Alternate #4	16,000
Original Total	**530,868**
Eliminate thermo plastic logos from crosswalks and stripe only	-9,000
Remove one (1) of the non-ADA mini shelters	-11,500
Remove one (1) set of site furnishings from Alternate #4, i.e. picnic table, barbecue pit, and trash receptacle	-1,900
Remove bio-basin; seed and straw only	-8,900
Revised Total	**499,568**

The changes that are noted above will eliminate some items that had been recommended by the City's Historic Preservation Commission, such as the overflow, special event parking area, but that cost alone, under the low bidder's submittal, is $67,900.00. Additionally, the number of mini-shelters will be reduced to two (2) instead of three (3) in total, but the larger shelter remains as it was bid.

To offset this additional cost of almost fifty thousand dollars ($50,000.00), the Department is requesting the Committee's support to reallocate this amount from the Capital Improvement Program's 2016 Budget from the line item identified as 'Future Trail Development – Construction," which has one million dollars ($1,000,000.00) currently allocated to it, which would still leave nine hundred fifty thousand dollars ($950,000.00) in that account and allow this project to proceed with the recommended bidder – ***Ideal Landscaping***.

This matter is being presented at tonight's Work Session to the Committee for its review of the bids and, if acceptable, to provide a recommendation in this regard. If the Committee makes a favorable recommendation, the matter would then be forwarded to City Council for its consideration. With City Council's endorsement, the contract for this project could be established by the end of April, with construction starting in late spring/early summer.

If any of the Committee Members have questions or comments about the plan sheets or the requested action, please feel free to contact the Department of Planning and Parks at (636) 458-0440. A presentation of this information is planned on this item at tonight's meeting. Thank you for your consideration of this information and providing direction on the same.

ARTICLE 10

BID FORM PROPOSAL

PROJECT: AL FOSTER TRAILHEAD PARK SITE IMPROVEMENTS
WILDWOOD, MISSOURI
terraspec Project No. 10-015

OWNER: CITY OF WILDWOOD
16860 MAIN STREET
WILDWOOD, MISSOURI 63040

BIDDER: Ideal Landscape Construction, Inc.
6264 Lemay Ferry Road
St. Louis, MO 63129

TO: CITY OF WILDWOOD, MISSOURI

1. The undersigned (herein called the "Bidder") in compliance with your Invitation for Bids for the construction of the above-referenced project, having examined the drawings and specifications with related documents as prepared by ***terraspec***, and having examined the site of the proposed work, being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and supplies to construct within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

2. BASE PROPOSAL: Bidder agrees to furnish all labor, materials, equipment and service required to construct and install all work shown on the drawings and called for in the specifications, except those items designated as add alternates. The bidder will complete this work as shown on the drawings and called for in the specifications, in accordance with said documents therewith for the sum indicated below.

BASE PROPOSAL TOTAL

Five hundred fourteen thousand eight hundred sixty eight DOLLARS ($ 514,868.00)

3. ALTERNATES: The bidder will add the following work items as called for in the drawings and specifications in accordance with said documents therewith for the following itemized sums. The CITY reserves the right to select or reject any or all, or any combination of alternates.

ALTERNATE No. 1 - This alternate is for the addition of the Overflow Parking Area Pavement as indicated on the Drawings. **Note: Alternate includes, but not necessarily limited to, all elements necessary to construct Overflow Parking Area including grading, compaction testing, flush concrete curbs, grass pave aggregate base, grass pave surfacing, seeding/mulching and plastic insert striping .**

ADD Sixty seven thousand nine hundred DOLLARS ($ 67,900.00)

ALTERNATE No. 2 - This alternate is for the addition of the Overflow Parking Area Landscape as indicated on the Drawings. **Note: Alternate includes, but not necessarily limited to, all elements necessary to install landscaping including spaded edge, shrub bed soil preparation, shrub bed mulch, and plant materials. Topsoil, lawn seeding, mulch to replace existing aggregate parking lot to be removed shall be included in the Base Bid Proposal.**

ADD Nine thousand DOLLARS ($ 9,000.00)

ALTERNATE No. 3 - This alternate is for the addition of (1) Information Board as indicated on the Drawings.

ADD Fourteen thousand five hundred DOLLARS ($ 14,500.00)

ALTERNATE No. 4 - This alternate is for the addition of (7) Picnic Tables, (4) Barbeque Pits, (7) Trash Receptacles, including associated concrete pads where applicable, as indicated on the Drawings. **Note: Alternate includes all elements necessary to install the aforementioned site furnishings. Barbeque Pit at Main Shelter, Benches and Bike Rack at Restroom Building and Concrete Pads at Mini Shelters shall be included in the Base Bid Proposal.**

ADD Sixteen thousand three hundred DOLLARS ($ 16,300.00)

ALTERNATE No. 5 - This alternate is for the addition of 3 Disc Golf Holes as indicated on the Drawings. **Note: Alternate includes all elements necessary to install the aforementioned Disc Golf Holes including, necessary Selective Tree and Brush Removal from Fairways, (9) Concrete Tee Pads, and (3) Heavy Duty Baskets**

ADD Sixteen thousand four hundred fifteen DOLLARS ($ 16,415.00)

ALTERNATE No. 6 - This alternate is for the addition of a Grated Drainage Trough across Grand Avenue, in lieu of the Reinforced Concrete Pipe, Flared End Sections and Drainage Swale Construction as indicated on the Drawings. **Note: Alternate includes all elements necessary to install the aforementioned Grated Drainage Trough.**

ADD Nine thousand nine hundred DOLLARS ($ 9,900.00)

There will be no time extensions granted to the construction contract with the owner's acceptance of any alternate.

4. UNIT PRICES: Should the undersigned be required to perform work other than that shown on the submitted proposal, he will be paid an additional sum or shall credit the Owner, as the case may be, on the basis of the unit Prices quoted below. Such prices shall be the sum total installed compensation payable for all required work, including materials, installation, overhead and profit, and be valid for the duration of the contract. Any direction for changes will be given to the contractor in writing by the Owner.

ITEM DESCRIPTION PRICE PER UNIT

NOTE: THIS SECTION (UNIT PRICES) NOT USED

5. Attached hereto is an affidavit in proof that the undersigned has not entered into any collusion with any person in respect to this proposal or any other proposal or the submitting of proposals for the contract for which this proposal is submitted.

6. The undersigned agrees that he will complete said work by **November 30, 2016** or allow the Owner as **liquidated damages, the sum of Five Hundred Dollars ($500.00)** for each calendar day thereafter, that the Contract remains uncompleted. Computation of Contract time shall commence on the seventh (7th) day following the date of mailing by regular mail of the Notice to Proceed, and every calendar day following thereafter, except as provided herein, shall be counted as a working day.

7. The undersigned hereby represents that he has carefully examined the Bid Documents, and will execute the Contract and its items, covenants, and conditions all in strict conformance to these requirements.

8. All materials and equipment furnished by this Contract, and all construction involved in this Contract shall be, and the same is guaranteed by the Contractor, free from defects owing to faulty materials or workmanship for a period of one (1) year after the date of completion of the above work covered by this Contract, and any part, equipment, material, or work which proves defective by reason of faulty material or workmanship, within said period of one year shall be replaced by the Contractor free of cost to the Owner.

9. It is understood that the City reserves the right to reject any or all bids, to waive informalities in bidding, and to accept the bid most advantageous to the City.

10. All materials and equipment furnished by the undersigned shall be fully warranted as provided by the manufacturer(s). Any equipment which proves to be defective by reason of faulty parts, materials, or workmanship within the specified time period shall be replaced by the undersigned firm free of cost to the City.

11. The Bidder agrees that this bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving bids.

12. Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within five (5) days and deliver the required Surety Bond or Bonds.

13. The bid security attached in the sum of Twenty five thousand seven hundred foty three and four tenths($ 25,743.40) is to become the property of the Owner in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the owner caused thereby.

14. The undersigned hereby agrees to commence work under Contract a maximum of fourteen (14) days of receiving written "Notice to Proceed" from the Owner and to fully complete the total project in accordance with the time schedule set forth in the CITY - Contractor Agreement. The undersigned

further agrees to pay liquidated damages in accordance with the requirements of the Contract.

15. Bidder acknowledges receipt of the following Addenda:

Addendum No. 1 Dated 02/25/16
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____

Respectfully submitted,

David Buckel-President

Name and Signature of Bidder

If an **INDIVIDUAL**

Name of Individual

Firm Name, if any

Residence Address

Address for Communications

If a **CORPORATION**

Ideal Landscape Construction, Inc.
Name of Corporation

1 Incorporated under the laws of the State of Name of Corporation?

David Buckel
President
Name and Title of Officer

2. Licensed to do business in Missouri?

Yes X No _____
(Check One)

6264 Lemay Ferry Road
St. Louis, MO 63129
Address for Communications

If a **PARTNERSHIP**

Name of Partnership

State names and residence addresses of all partners

Partner

Address for Communications

SUBCONTRACTOR UTILIZATION FORM

This report must accompany and be part of the sealed bid proposal.

1. Name of Bidder: Ideal Landscape Construction, Inc.

2. Address Bidder: St. Louis (City) MO (State) 63129 (Zip) (314)892-9500 (Phone)

3. The above-named bidder intends to subcontract for materials, services, supplies, specialty contractors, etc., in the following fashion:

Names and Addresses of Subcontractor Which the Contractor Anticipates Utilizing	Nature of Participation	$ Value of Subcontractor
Taylor Excavating	Crane Service	$5,200.00
Metron Surveying	Layout	$5,975.00
Traffic Control Company	Thermoplastic Logo	$9,000.00
Ford Asphalt	Asphalt	$49,200.00
Bob Otto Striping	Striping	$3,600.00
Reinhold Electric	Electrical Work	$19,242.00
Woods Construction	Install of Shelters	$27,000.00
	A. Total of Above	$119,217.00
	B. Total Bid Amount	$514,868.00
Subcontractor Utilization as a % of Total Bid Amount: (A/B x 100)		23.15%

The General Contractor shall perform 51% of the contract with his own company work force.

David Buckel-President
Name-Authorized Officer of Bidder

Signature-Office Bidder

03/29/16
Date

The City of Wildwood, Missouri reserves the right, before any award of the Contract is made, to require of any bidder to whom it may make an award of the Contract, a non-collusion affidavit in the form designated below:

NON-COLLUSION AFFIDAVIT

STATE OF Missouri,

COUNTY OF Jefferson,

David Buckel, being first duly sworn, deposes and says that he is President *(sole owner, partner, president, secretary, etc.) of Ideal Landscape Construction, Inc., the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder had not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or any one else to put in a sham bid, or that any one shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with any one to fix the bid price of said bidder or of any other bidder, or to fix any overhead, profit or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or any one interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder had not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

SIGNED:

Subscribed and sworn to before me this 29th day of February, 2016.
Seal of Notary

Rebecca Dawn White
Notary Public

REBECCA DAWN WHITE
MY COMMISSION EXPIRES 3/05/2016
NOTARY PUBLIC
NOTARY SEAL
COMMISSION #12310860
JEFFERSON COUNTY
STATE OF MISSOURI

City of Wildwood
Fiscal Year 2016

2016 Capital Improvement Sales Tax Fund

		Source Funds	FY 2016
Planned Project Expenditures			
Park and Trail Development			
40-480-07	Property Acquisitions	Local	900,000
40-480-11	Al Foster Trailhead Improvements - Construction	Local	450,000
40-480-21	Homestead Trail Design/Engineering and Improvements	Local	50,000
40-480-32	Wildwood Greenway - Phase VI - Construction	Local/Grant	350,000
40-480-33	Pedestrian Bridge Over Route 100, at Eatherton Road - Construction	Local/Grant	1,200,000
40-480-34	Kohn Park Repairs	Local	50,000
40-480-35	Old Pond School Repairs	Local	10,000
40-480-38	Capital Equipment/Facilities Purchase/Replacement	Local	50,000
40-480-39	Monarch Levee Trailhead	Local/Grant	200,000
40-480-41	Community Park - Phase II - Construction	Local/Grant	700,000
40-480-42	Community Park - Phase III - Design and Engineering	Local	150,000
40-480-44	Boardwalk Trail Between Mobil-On-The-Run and Pedestrian Bridge	Local	330,000
40-480-45	Future Trail Development - Design	Local	150,000
40-480-	Future Trail Development - Construction	Local	1,000,000
40-480-	Trail Resurfacing	Local	100,000
40-480-	Restroom Facilities - Old Pond School	Local	120,000
40-480-	Athletic Field Planning and Development	Local	50,000
40-480-	Belleview Farms	Local/Grant	25,000
	Sub Total - Park Development		5,885,000
Other Capital Investment			
40-490-05	Great Streets Project(s)	Local	50,000
70-480-20	Vehicle Replacement / Purchase	Local	25,000
70-480-34	Rural Internet Access Project	Local	50,000
	Sub Total - Other Capital Investment		125,000
Total Expenditures			6,010,000

Al Foster Trail Head Park

Site Development

City of Wildwood, Missouri

GENERAL NOTES:

1. UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF IMPROVEMENTS.
2. TOPOGRAPHIC INFORMATION PROVIDED BY HEIDEMAN & ASSOC., INC AND DOERING ENGINEERING, INC.
3. PROPOSED CONTOURS ARE SHOWN TO FINISHED GRADES. CONTRACTOR SHALL GRADE PAVEMENT AND BUILDING PAD AREAS TO FINISH GRADES INDICATED, UNLESS OTHERWISE INDICATED.
4. PROPOSED GRADES SHALL BE WITHIN 0.1 FEET, MORE OR LESS, OF THOSE SHOWN ON THE GRADING PLAN.
5. CONTRACTOR TO CALCULATE CUT/FILL QUANTITIES AND NOTIFY ENGINEER PRIOR TO CONSTRUCTION IF BALANCE CONDITION CAN NOT BE MET.
6. NO GRADING SHALL OCCUR ON THE SITE UNTIL A GRADING PERMIT IS SECURED WITH THE CITY OF WILDWOOD DEPARTMENT OF PUBLIC WORKS. SILTATION CONTROL DEVICES SHALL BE INSTALLED AND FUNCTIONING BEFORE A GRADING PERMIT WILL BE ISSUED.
7. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED AND STRAWED WITHIN 30 DAYS FROM THE COMPLETION OF GRADING OPERATIONS.
8. STORM SEWER CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO LATEST METROPOLITAN ST. LOUIS SEWER DISTRICT "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWER AND DRAINAGE FACILITIES", AND THE CITY OF WILDWOOD STANDARDS UNLESS OTHERWISE NOTED HEREIN.
9. EXISTING ABOVE & BELOW GROUND UTILITIES TO BE PROTECTED AND USED IN PLACE, UNLESS OTHERWISE SPECIFIED (SEE DEMOLITION PLAN).
10. MANHOLES AND INLET TOPS BUILT WITHOUT FURNISHED ELEVATIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. LOCATION AND ELEVATION OF EXISTING INLETS, MANHOLES AND PIPES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
12. ALL CONSTRUCTION ACTIVITY SHALL BE RESTRICTED TO AREA WITHIN THE LIMITS OF DISTURBANCE INDICATED ON THE PLAN UNLESS OTHERWISE INDICATED OR DIRECTED.

SITE GRADING NOTES:

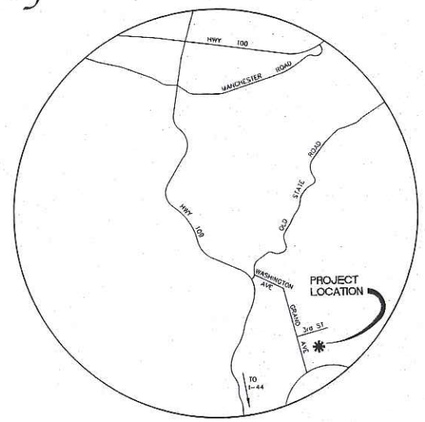
1. NOTIFY THE CITY OF WILDWOOD DEPARTMENT OF PUBLIC WORKS 48 HOURS PRIOR TO THE COMMENCEMENT OF GRADING AND/OR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. PARKING ON NON-SURFACED AREAS IS PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVING CONDITIONS. CONTRACTOR SHALL KEEP ROAD CLEAR OF MUD AND DEBRIS.
3. THE STREETS SURROUNDING THIS DEVELOPMENT AND ANY STREET USED FOR CONSTRUCTION ACCESS THERETO SHALL BE CLEANED THROUGHOUT THE DAY.
4. EROSION AND SILTATION CONTROL SHALL BE INSTALLED PRIOR TO ANY GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR CONTROLLING REGULATORY AGENCY AND ADEQUATE VEGETATIVE GROWTH INSURES NO FURTHER EROSION OF THE SOIL.
5. ADDITIONAL SILTATION CONTROL MAY BE REQUIRED AS DEEMED NECESSARY BY THE CITY OF WILDWOOD.
6. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
7. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED TO SUCH A DENSITY AS TO PREVENT EROSION.
8. WHEN CLEARING AND/OR GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS, ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO RETAIN SOIL MATERIALS ON SITE. PROTECTIVE MEASURES MAY BE REQUIRED BY THE DIRECTOR OF PUBLIC WORKS / CITY ENGINEER SUCH AS PERMANENT SEEDING, PERIODIC WETTING, MULCHING, OR OTHER SUITABLE MEANS.
9. IF CUT AND FILL OPERATIONS OCCUR DURING A SEASON NOT FAVORABLE FOR IMMEDIATE ESTABLISHMENT OF PERMANENT GROUND COVER, A FAST GERMINATING ANNUAL SUCH AS RYE GRASSES OR SUDAN GRASSES SHALL BE UTILIZED TO RETARD EROSION.
10. NO EXCAVATION SHALL BE MADE SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PROPERTY OR ANY PUBLIC OR PRIVATE STREET WITHOUT SUPPORTING AND PROTECTING SUCH PUBLIC OR PRIVATE STREET OR PROPERTY FROM SETTLING, CRACKING OR OTHER DAMAGE.
11. STORM WATER PIPES, OUTLETS AND CHANNELS SHALL BE PROTECTED BY SILT BARRIERS AND KEPT FREE OF WASTE AND SILT AT ALL TIMES PRIOR TO FINAL SURFACE STABILIZATION AND/OR PAVING.
12. SILTATION FENCES SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND FOR THE AMOUNT OF SEDIMENT WHICH HAS ACCUMULATED. REMOVAL OF SEDIMENT WILL BE REQUIRED WHEN IT REACHES 1/2 THE HEIGHT OF THE SILTATION FENCE.
13. ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER LINES AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (ASTM D-1557) FOR THE ENTIRE DEPTH OF THE FILL. COMPACTED GRANULAR BACKFILL IS REQUIRED IN ALL TRENCH EXCAVATION UNDER ALL PAVED AREAS. COMPACTION TESTING TO BE PERFORMED BY GEOTECHNICAL ENGINEER HIRED BY THE CONTRACTOR.
14. SOFT SOILS IN THE BOTTOM OF BANKS OF ANY EXISTING OR FORMER POND SITES OR TRIBUTARIES OR ANY SEDIMENT BASINS OR TRAPS SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENTLY TO BE USED AS FILL. THIS MATERIAL SHALL BE PLACED PER RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER (HIRED BY THE CONTRACTOR).
15. ALL TRASH AND DEBRIS ON-SITE, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
16. EXISTING TREES INDICATED TO BE REMOVED MAY BE BURNED ON-SITE PROVIDED THE APPROPRIATE PERMITS ARE OBTAINED PRIOR TO BURN OPERATIONS.
17. ROOTS OF EXISTING TREES INDICATED TO BE REMOVED SHALL BE GRUBBED TO A MIN. DEPTH OF 18" BELOW FINISH GRADE.
18. ANY WELLS, CISTERNS AND/OR SPRINGS, WHICH MAY EXIST ON THIS PROPERTY, SHOULD BE LOCATED AND SEALED IN A MANNER ACCEPTABLE TO THE CITY OF WILDWOOD AND THE MISSOURI DEPARTMENT OF NATURAL RESOURCES.
19. ALL EXCAVATIONS, GRADING OR FILLING SHALL HAVE A FINISHED GRADE NOT TO EXCEED A 3:1 SLOPE (33%), UNLESS SPECIFICALLY APPROVED OTHERWISE.

BENCHMARK INFORMATION:
St Louis County Highway and Transportation Benchmark Book:
16-24 Elevation 453.75
"Standard Tablet" stamped 53-75 S.L.C. at northwest entrance to La Salle Institute; on northwest end of east headwall along Highway 109 about 0.8 miles northwest of the intersection of Highway 109 and Old State Road.

STOP! Call Before you DIG
1-800-344-7483
TOLL FREE
State Law requires 2 days advance notice. "This law in the State of Missouri defines emergency excavation as one preventing danger to life, health, or property."
MISSOURI ONE-CALL SYSTEM INC.
10223 NORTHEAST DR.
JEFFERSON CITY, MO 65109

UTILITY SERVICES

WATER	MISSOURI AMERICAN WATER
SEWER	SEPTIC
FIRE	METRO WEST FIRE DISTRICT
ELECTRIC	AMEREN U.E.
GAS	LACLEDE GAS CO.
PHONE	AT T



LOCATION MAP

February 2016

SHEET LIST

C1	DEMOLITION PLAN
C2	SITE LAYOUT PLAN
C3	SITE GRADING PLAN
C4	ENLARGED PLANS
SWPP	ENLARGED PLANS
E1	SITE ELECTRICAL PLAN
D1-D4	DETAILS
L1	LANDSCAPE PLAN
L2	DETAILS + SPECS
S1	SPECIFICATIONS
S2	SPECIFICATIONS

ALTERNATES

ALT. #1 - Overflow Parking Area Pavement
Flush Concrete Curbs, Grass Pave Agg. Base, Grass Pave Surfacing, Compaction Test, Seeding, Striping

ALT. #2 - Overflow Parking Area Landscape
Shrub Bed Soil Prep, Shrub Bed Mulch, Shrubs, (Topsoil/Seed/Mulch to replace aggregate parking removed shall be included in the Base Bid)

ALT. #3 - Information Board
Installation, Owner Supplied Roof Install

ALT. #4 - Picnic Tables, BBQ Pits, Trash Receptacles

ALT. #5 - 3 Station Disc Golf Course
Heavy Duty Baskets, Conc. Tee Pads, Tee Signs, Selective Clearing

ALT. #6 - Grated Drainage Trough
In lieu of RCP and Swale Construction.

WILDWOOD

PREPARED FOR:
Department of Planning + Parks
16860 Main Street Wildwood,
Missouri 63040 (636) 458-0440
CONTACT: Joe Vujnich jvujnich•city of wildwood.com

PREPARED BY:
terraspec
LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE
5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718
CONTACT: Ken Keitel kjkeitel•terraspecstl.com

CONSULTING ENGINEERS

ELECTRICAL:
HEIDEMAN | ASSOCIATES, INC.
Consulting Civil, Surveying Electrical Mechanical Engineers
13545 Barrett Parkway Dr.
Suite 200
St. Louis, Missouri 63021
Phone: 314-822-2217
Fax: 314-822-7858

CIVIL:
Engineered By:
DOERING ENGINEERING Inc.
CIVIL ENGINEERING • PLANNING • SURVEYING
4850 Lemay Ferry Road
Suite 220
Saint Louis, Missouri, 63129
Telephone: (314) 487-6913
Facsimile: (314) 487-2379
E-Mail: mdoering@doeringeng.com

STRUCTURAL:
Hawkinson Associates, LLC
323 Fox Briar Lane Ballwin, MO 63021
314.807.4386 Office/Cell 636.227.3776 Fax
todd@hawkinsonassociates.com

LEGEND

EXISTING CONDITIONS		NEW IMPROVEMENTS	
CONTOUR	500	CONTOUR	500
SPOT ELEVATION	×500.00	SPOT ELEVATION	+ 500.00
STORM SEWER		STORM SEWER	
SANITARY SEWER		MANHOLE	
MANHOLE		AREA INLET	
CURB INLET		GRATE INLET	
GRATE INLET		TO BE REMOVED	T.B.R.
WATER LINE		USE IN PLACE	U.I.P.
FIRE HYDRANT		ADJUST TO GRADE	A.T.G.
GAS SERVICE			
ELECTRIC SERVICE			
TELEPHONE SERVICE			
UTILITY POLE			
GUY WIRE			
LIGHT STANDARD			
SIGN			
TREE			
BUSH			

BASE MAP 26V

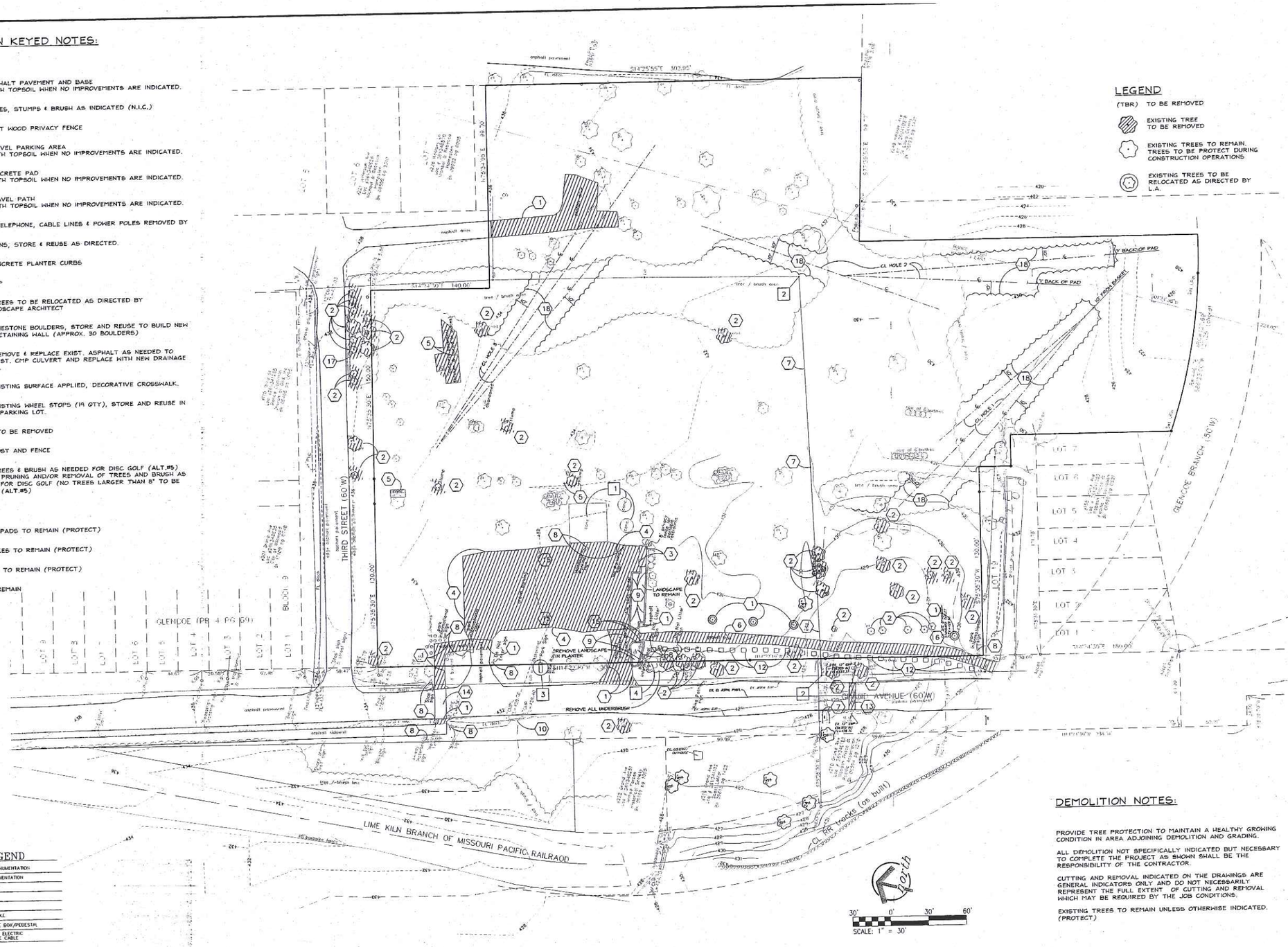
DEMOLITION KEYED NOTES:

REMOVE

1. REMOVE ASPHALT PAVEMENT AND BASE REPLACE WITH TOPSOIL WHEN NO IMPROVEMENTS ARE INDICATED.
2. REMOVE TREES, STUMPS & BRUSH AS INDICATED (N.I.C.)
3. REMOVE 6' HT WOOD PRIVACY FENCE
4. REMOVE GRAVEL PARKING AREA REPLACE WITH TOPSOIL WHEN NO IMPROVEMENTS ARE INDICATED.
5. REMOVE CONCRETE PAD REPLACE WITH TOPSOIL WHEN NO IMPROVEMENTS ARE INDICATED.
6. REMOVE GRAVEL PATH REPLACE WITH TOPSOIL WHEN NO IMPROVEMENTS ARE INDICATED.
7. ELECTRIC, TELEPHONE, CABLE LINES & POWER POLES REMOVED BY OTHERS
8. REMOVE SIGNS, STORE & REUSE AS DIRECTED.
9. REMOVE CONCRETE PLANTER CURBS
10. REMOVE CMP
11. EXISTING TREES TO BE RELOCATED AS DIRECTED BY OWNER/LANDSCAPE ARCHITECT
12. REMOVE LIMESTONE BOULDERS, STORE AND REUSE TO BUILD NEW BOULDER RETAINING WALL (APPROX. 30 BOULDERS)
13. SAWCUT, REMOVE & REPLACE EXIST. ASPHALT AS NEEDED TO REMOVE EXIST. CMP CULVERT AND REPLACE WITH NEW DRAINAGE STRUCTURE.
14. REMOVE EXISTING SURFACE APPLIED, DECORATIVE CROSSWALK.
15. REMOVE EXISTING WHEEL STOPS (19 QTY), STORE AND REUSE IN PROPOSED PARKING LOT.
16. 6x6 POST TO BE REMOVED
17. REMOVE POST AND FENCE
18. REMOVE TREES & BRUSH AS NEEDED FOR DISC GOLF (ALT.#5) SELECTIVE PRUNING AND/OR REMOVAL OF TREES AND BRUSH AS INDICATED FOR DISC GOLF (NO TREES LARGER THAN 8" TO BE REMOVED) (ALT.#5)

REMAIN

1. CONCRETE PADS TO REMAIN (PROTECT)
2. POWER POLES TO REMAIN (PROTECT)
3. PARK SIGN TO REMAIN (PROTECT)
4. TREE TO REMAIN



LEGEND

- (TBR) TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- EXISTING TREES TO REMAIN. TREES TO BE PROTECT DURING CONSTRUCTION OPERATIONS
- EXISTING TREES TO BE RELOCATED AS DIRECTED BY L.A.

LEGEND

- FOUND MONUMENTATION
- SET MONUMENTATION
- CLEAN OUT
- SIGN
- GUY WIRE
- UTILITY POLE
- TELEPHONE BOX/PEDESTAL
- OVERHEAD ELECTRIC TELEPHONE CABLE
- BRUSH
- TREE
- TREE / BRUSH LINE

BENCHMARK: INFORMATION:
ST LOUIS COUNTY HIGHWAY AND TRANSPORTATION BENCHMARK BOOK:
16-24 ELEVATION 453.75
"STANDARD TABLET" STAMPED 53-75 S.L.C. AT NORTHWEST ENTRANCE TO LA SALLE INSTITUTE; ON NORTHWEST END OF EAST HEADWALL ALONG HIGHWAY 109 ABOUT 0.8 MILES NORTHWEST OF THE INTERSECTION OF HIGHWAY 109 AND OLD STATE ROAD.

NOTE: UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM BEST AVAILABLE RECORDS, THEREFORE THE RELATIONSHIP BETWEEN PROPOSED WORK AND EXISTING FACILITIES, STRUCTURES, AND UTILITIES MUST BE CONSIDERED APPROXIMATE, AND IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXACT LOCATION AND THE EXISTENCE OF ANY NOT SHOWN.

DEMOLITION NOTES:

PROVIDE TREE PROTECTION TO MAINTAIN A HEALTHY GROWING CONDITION IN AREA ADJOINING DEMOLITION AND GRADING.

ALL DEMOLITION NOT SPECIFICALLY INDICATED BUT NECESSARY TO COMPLETE THE PROJECT AS SHOWN SHALL BE THE REBPONSIBILITY OF THE CONTRACTOR.

CUTTING AND REMOVAL INDICATED ON THE DRAWINGS ARE GENERAL INDICATORS ONLY AND DO NOT NECESSARILY REPRESENT THE FULL EXTENT OF CUTTING AND REMOVAL WHICH MAY BE REQUIRED BY THE JOB CONDITIONS.

EXISTING TREES TO REMAIN UNLESS OTHERWISE INDICATED. (PROTECT)

LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE

terraspec

5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718

Al Foster Trailhead Park

Grand Ave & 3rd St.
Wildwood, Missouri

OWNER:

City of Wildwood

16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

SHEET TITLE

Existing Condition/ Demo Plan

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

REVISION

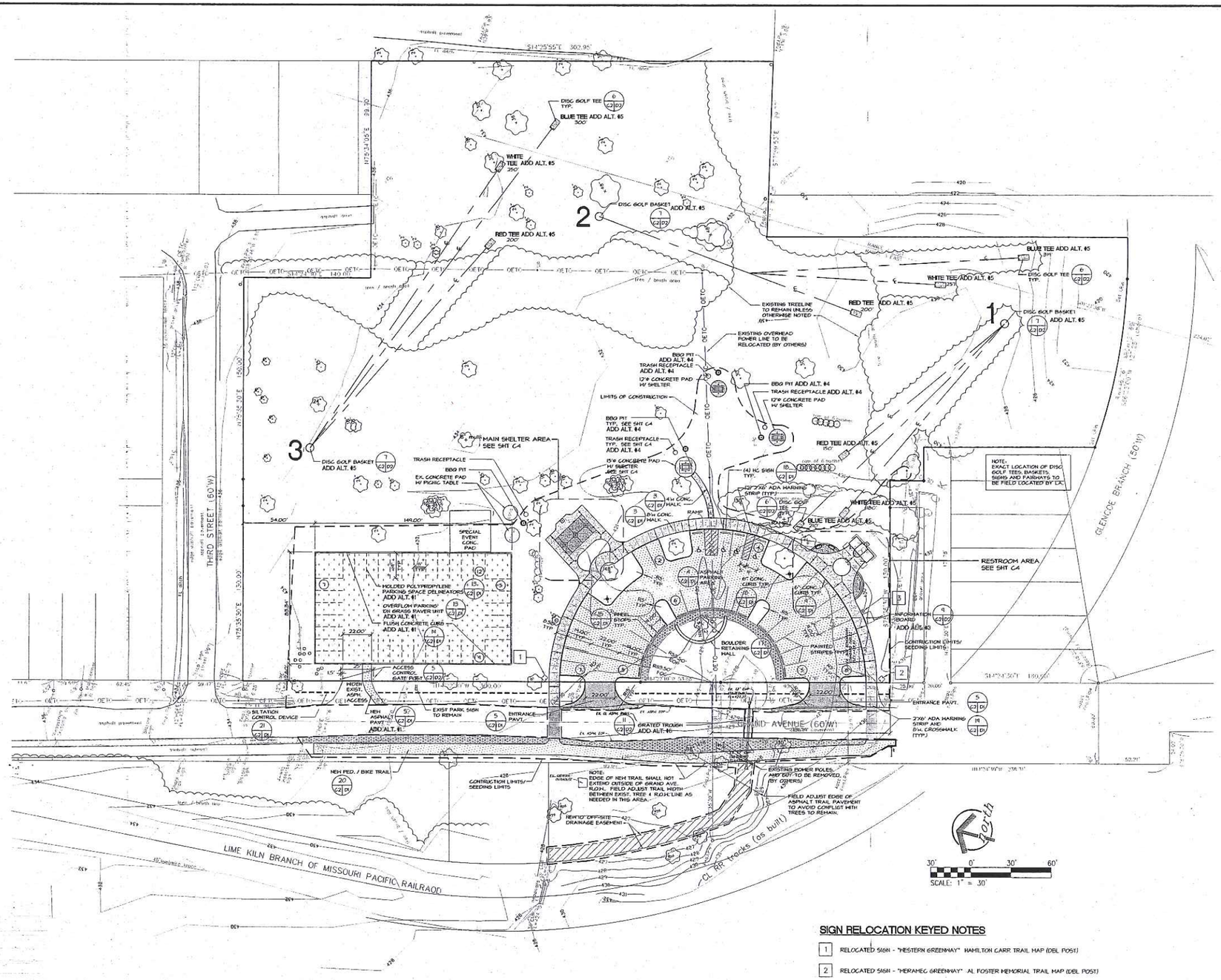
- -

SHEET NUMBER

C1

LEGEND

- AREA INLET/CURB INLET
- MANHOLE
- FLARED END SECTION (FES)
- CO CLEAN OUT
- LS LIGHT STANDARD
- BOLLARD LIGHT
- GUY WIRE
- UP UTILITY POLE
- GV GAS VALVE
- WV WATER VALVE
- WM WATER METER
- BENCHMARK
- SIGN
- MB MAILBOX
- HANDICAP
- YF YARD FAUCET
- FP FLAGPOLE
- W WATER LINE
- G GAS LINE
- OE OVERHEAD ELECTRIC
- OT OVERHEAD TELEPHONE
- OETC OVERHEAD ELECTRIC TELEPHONE CABLE
- BUSH
- SIZE DECIDUOUS TREE
- SIZE CONIFEROUS TREE
- EOP EDGE OF PAVEMENT
- FOC FACE OF CURB
- BOC BACK OF CURB
- NEW EXPANSION JOINT SEE DETAIL 1/D2



SIGN RELOCATION KEYED NOTES

1. RELOCATED SIGN - "WESTERN GREENWAY" HAMILTON CARR TRAIL MAP (DBL POST)
2. RELOCATED SIGN - "MERAMEC GREENWAY" AL FOSTER MEMORIAL TRAIL MAP (DBL POST)
3. RELOCATED SIGN - "GLENCOE OPPORTUNITIES" HISTORICAL INFORMATION SIGN (SINGLE POST)

NOTE: Underground facilities, structures, and utilities have been plotted from best available records, therefore the relationship between proposed work and existing facilities, structures, and utilities must be considered approximate, and it is the contractors responsibility to determine their exact location and the existence of any not shown.

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LANDSCAPE ARCHITECTURE

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SHEET TITLE

Site Layout Plan

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

REVISION

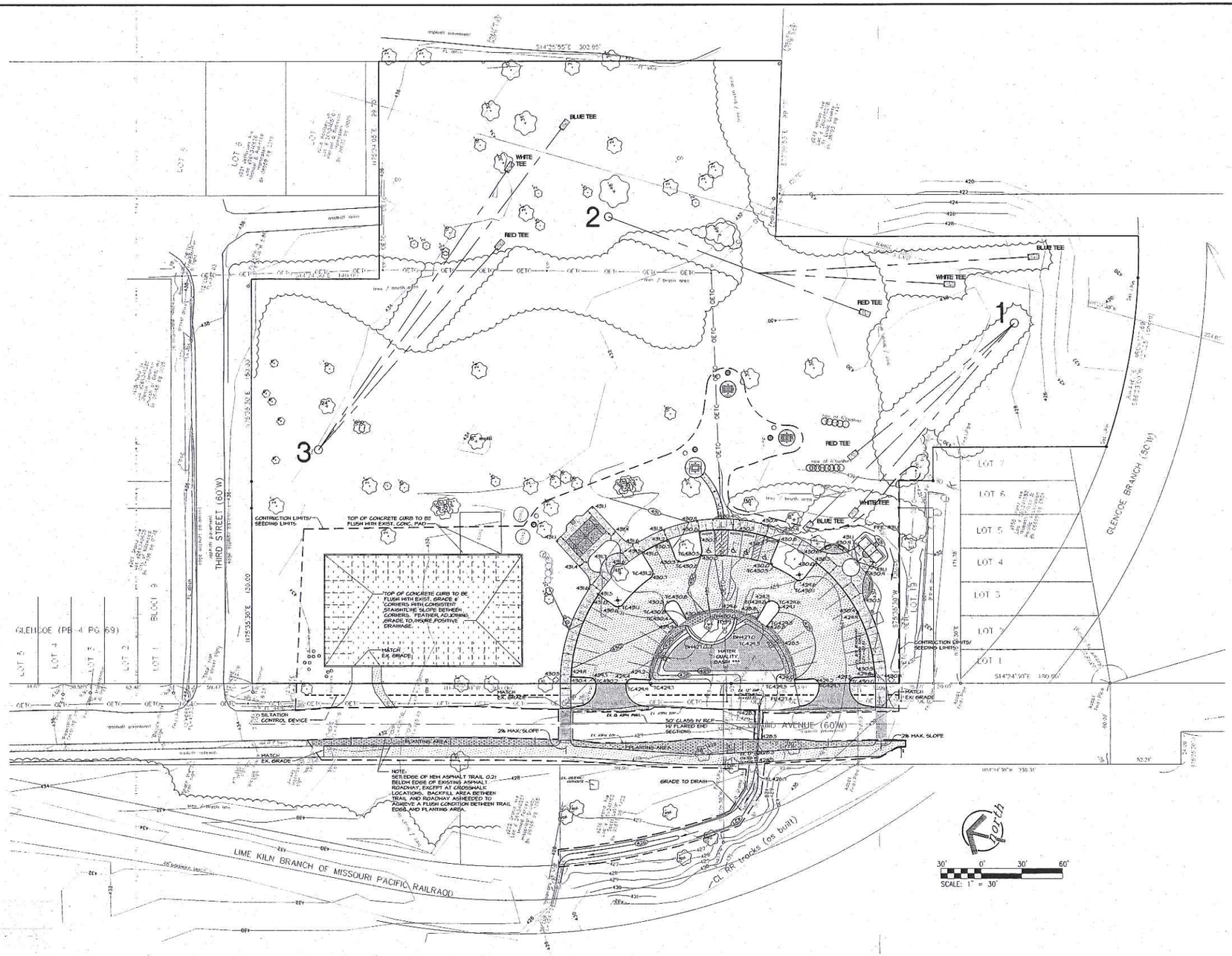
- -

SHEET NUMBER

C2

LEGEND

- AREA INLET/CURB INLET
- MANHOLE
- FLARED END SECTION (FES)
- CO CLEAN OUT
- LS LIGHT STANDARD
- BOLLARD LIGHT
- GUY WIRE
- UP UTILITY POLE
- GV GAS VALVE
- WV WATER VALVE
- WM WATER METER
- BENCHMARK
- SIGN
- MB MAILBOX
- HANDICAP
- YF YARD FAUCET
- FP FLAGPOLE
- —W— WATER LINE
- —G— GAS LINE
- —OE— OVERHEAD ELECTRIC
- —OT— OVERHEAD TELEPHONE
- —OETC— OVERHEAD ELECTRIC TELEPHONE CABLE
- BUSH
- SIZE DECIDUOUS TREE
- SIZE CONIFEROUS TREE
- EOP EDGE OF PAVEMENT
- FOC FACE OF CURB
- BOC BACK OF CURB
- GRADING LIMITS
- EXIST. TREE TO REMAIN
- EXIST TREE TO PROTECT
- NEW EXPANSION JOINT SEE DETAIL 1/D2



NOTE:
*** REMOVE ADDITIONAL 30" OF EXISTING SOIL BELOW PROPOSED FINISH GRADE WITHIN SHADED AREA AND REPLACE WITH BIO RETENTION SOIL. SEE SHT L1 FOR SPECS.

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SHEET TITLE

Site Grading Plan

JOB NUMBER

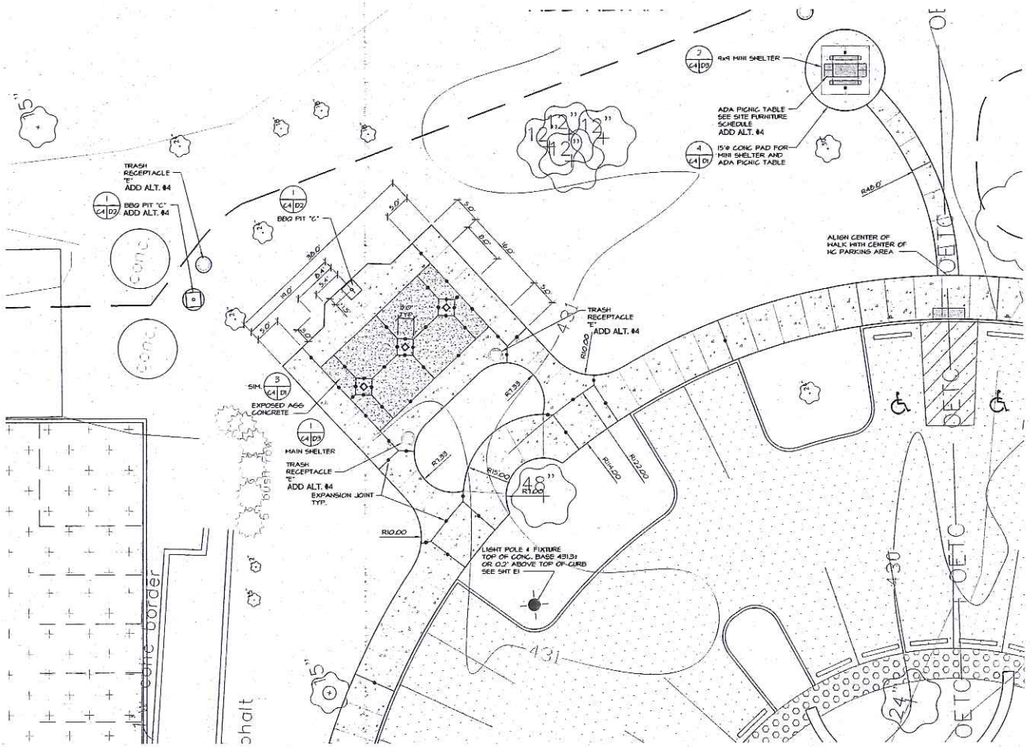
10015

DATE 02/08/16 DRAWN BY DWD

REVISION

SHEET NUMBER

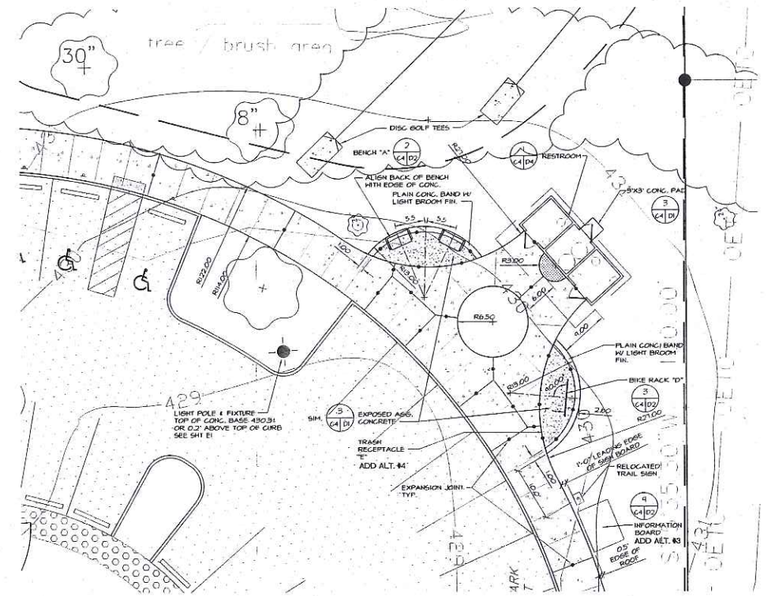
C3



Main and ADA Mini Shelter Areas

SCALE: 1" = 10'-0"

SCALE: 1" = 10'



Restroom Area

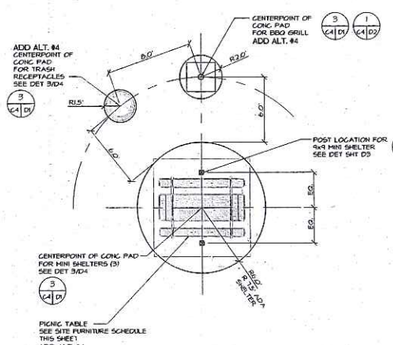
SCALE: 1" = 10'-0"

SCALE: 1" = 10'

Site Furniture Schedule

KEY	ITEM	QUANTITY	MODEL	MANUFACTURER	LOCAL DISTRIBUTOR	REMARKS
A	4' BENCH	2	CN410(D)	WABASH VALLEY 1-800-253-8619	FRY & ASSOCIATES 816-221-4825	COLORS: TO BE SELECTED
B	ADA PICNIC TABLE ADD ALT.#4	2	SG115 (D)	WABASH VALLEY 1-800-253-8619	FRY & ASSOCIATES 816-221-4825	COLORS: TO BE SELECTED
	REG. PICNIC TABLE ADD ALT.#4	5	SG111 (D)	WABASH VALLEY 1-800-253-8619	FRY & ASSOCIATES 816-221-4825	COLORS: TO BE SELECTED
C	BBQ PIT BASE BID	1	D2-48-B2 W/ UTIL. SHELF S1	PILOT ROCK R.J. THOMAS MFG. 1-800-762-5002	FRY & ASSOCIATES 816-221-4825	COLOR - BLACK
	BBQ PIT ADD ALT.#4	4	D2-48-B2 W/ UTIL. SHELF S1	PILOT ROCK R.J. THOMAS MFG. 1-800-762-5002	FRY & ASSOCIATES 816-221-4825	COLOR - BLACK
D	7' BIKE RACK	1	125-40	DuMOR, INC. 1-800-598-4018	FRY & ASSOCIATES 816-221-4825	COLOR: TO BE SELECTED POWDER COAT FINISH
E	32 GAL. TRASH RECEPTACLES ADD ALT.#4	7	FR400 (D) W/ SB160 LID	WABASH 1-800-253-8619	FRY & ASSOCIATES 816-221-4825	COLOR: TO BE SELECTED POWDER COAT FINISH

* NOTE:
CONTRACTOR MAY SUBMIT "EQUAL" SUBSTITUTIONS FOR ALL FURNITURE AND EQUIPMENT TO OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PROVIDED THEY ARE RECEIVED NO LATER THAN 5 DAYS PRIOR TO BID OPENING.



Picnic Table/ Mini Shelter Area Detail

SCALE: 1" = 5'-0"

SCALE: 1" = 5'

LEGEND

- AREA INLET/CURB INLET
- MANHOLE
- FLARED END SECTION (FES)
- CLEAN OUT
- LIGHT STANDARD
- BOLLARD LIGHT
- GUY WIRE
- UTILITY POLE
- GAS VALVE
- WATER VALVE
- WATER METER
- BENCHMARK
- SIGN
- MAILBOX
- HANDICAP
- YARD FAUCET
- FLAGPOLE
- WATER LINE
- GAS LINE
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- OVERHEAD ELECTRIC TELEPHONE CABLE
- BUSH
- DECIDUOUS TREE
- CONIFEROUS TREE
- EOP EDGE OF PAVEMENT
- FOC FACE OF CURB
- BOC BACK OF CURB

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OWNER

City of Wildwood

16860 Main Street
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63040
Ph: 636-458-0440
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SHEET TITLE

Enlarged Site Layout Plan

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

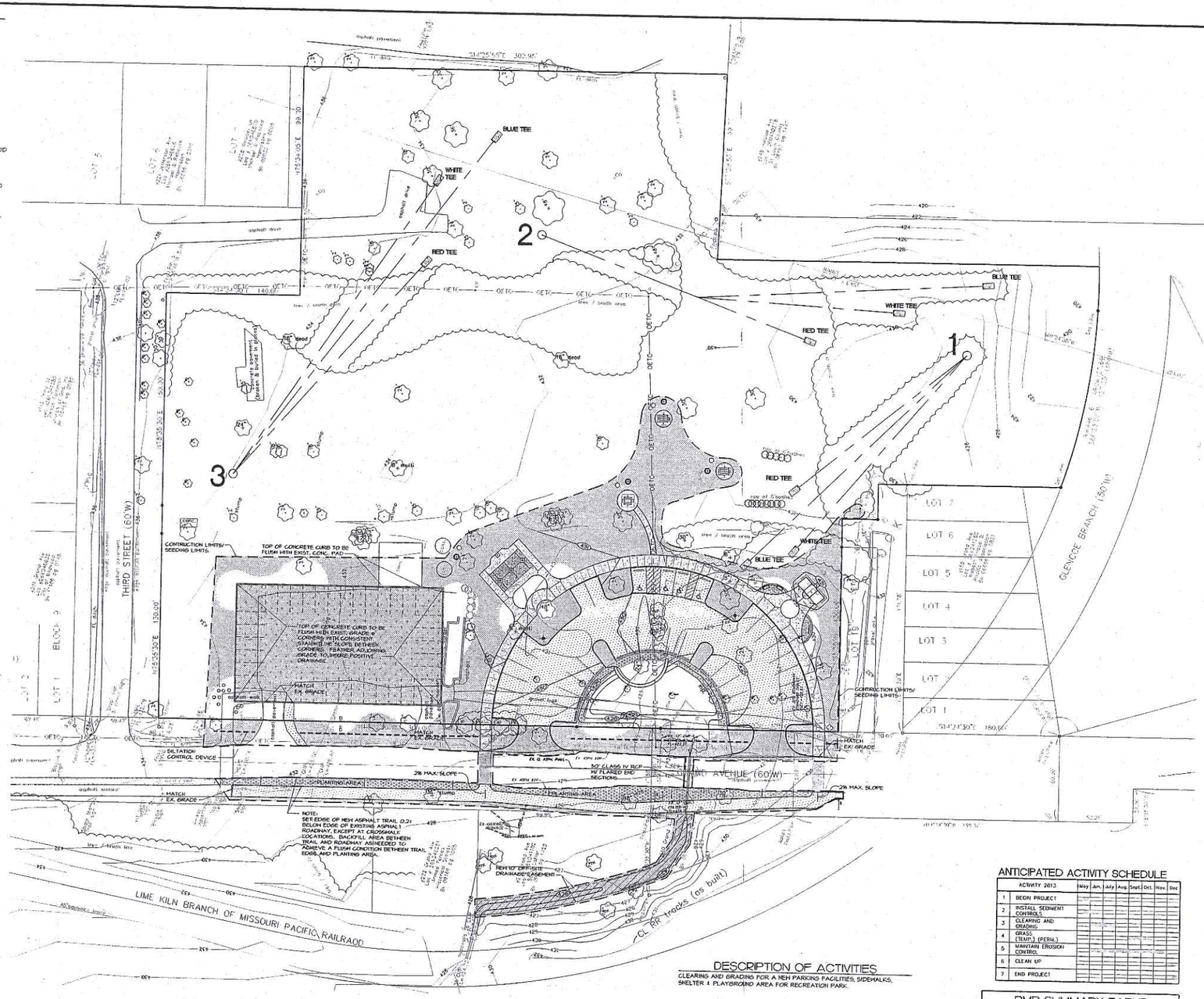
REVISION

SHEET NUMBER

C4

SEDIMENT / EROSION CONTROL NOTES:

1. NOTIFY THE CITY OF WILDWOOD DEPARTMENT OF PUBLIC WORKS 48 HOURS PRIOR TO THE COMMENCEMENT OF GRADING AND/OR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. STORM WATER RUNOFF FROM THIS SITE DOES NOT FLOW TO A VALUABLE RESOURCE WATER AS DEFINED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES.
3. PROVIDE ADEQUATE OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES. PARKING ON NON-SURFACED AREAS IS PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVING CONDITIONS.
4. THE STREETS SURROUNDING THIS DEVELOPMENT AND ANY STREET USED FOR CONSTRUCTION ACCESS THERETO SHALL BE CLEANED AS NEEDED THROUGHOUT THE DAY.
5. INTERIM STORM WATER DRAINAGE CONTROL IN THE FORM OF SILTATION CONTROL MEASURES ARE REQUIRED.
6. ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY THE CITY OF WILDWOOD DEPARTMENT OF PUBLIC WORKS.
7. EROSION AND SILTATION CONTROL SHALL BE INSTALLED PRIOR TO ANY GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR CONTROLLING REGULATORY AGENCY AND ADEQUATE VEGETATIVE GROWTH INSURES NO FURTHER EROSION OF THE SOIL.
8. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
9. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION
10. WHEN CLEARING AND/OR GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 5 DAYS, ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO RETAIN SOIL MATERIALS ON SITE. PROTECTIVE MEASURES MAY BE REQUIRED BY THE DIRECTOR OF PUBLIC WORKS SUCH AS PERMANENT SEEDING, PERIODIC RETTING, MULCHING, OR OTHER SUITABLE MEANS.
11. IF CUT AND FILL OPERATIONS OCCUR DURING A SEASON NOT FAVORABLE FOR IMMEDIATE ESTABLISHMENT OF PERMANENT GROUND COVER, A FAST GERMINATING ANNUAL SUCH AS RYE GRASSES OR SUDAN GRASSES SHALL BE UTILIZED TO RETARD EROSION. IF ADEQUATE STORMWATER DETENTION AND EROSION CONTROL DEVICES HAVE NOT BEEN ESTABLISHED.
12. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED
13. NO EXCAVATION SHALL BE MADE SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PROPERTY OF ANY PUBLIC OR PRIVATE STREET WITHOUT SUPPORTING AND PROTECTING SUCH PUBLIC OR PRIVATE STREET OR PROPERTY FROM SETTLING, CRACKING OR OTHER DAMAGE.
14. STORM WATER PIPES, OUTLETS AND CHANNELS SHALL BE PROTECTED BY SILT BARRIERS AND KEPT FREE OF WASTE AND SILT AT ALL TIMES PRIOR TO FINAL SURFACE STABILIZATION AND/OR PAVING.
15. SILTATION FENCES SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND FOR THE AMOUNT OF SEDIMENT WHICH HAS ACCUMULATED. REMOVAL OF SEDIMENT WILL BE REQUIRED WHEN IT REACHES 1/2 THE HEIGHT OF THE SILTATION FENCE.
16. EROSION CONTROL MEASURES OUTLINED ON THIS EROSION & SEDIMENT CONTROL PLAN ARE TO BE USED AS A GUIDE FOR THE CONTRACTOR IN THE MANAGEMENT OF SEDIMENT AND EROSION CONTROL. A STORM WATER POLLUTION PREVENTION MANUAL HAS ALSO BEEN PREPARED FOR THIS PROJECT AND SHALL ALSO BE USED IN THE MANAGEMENT OF SEDIMENT AND EROSION CONTROL FOR THE CONSTRUCTION SITE.
17. ANY LAND CLEARING, CONSTRUCTION, OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN, AND THE PERSON ISSUED A LAND DISTURBANCE PERMIT ASSUMES AND ACKNOWLEDGES RESPONSIBILITY FOR COMPLIANCE WITH THE APPROVED STORM WATER POLLUTION PLAN AT THE SITE OF THE PERMITTED ACTIVITY.
18. AREAS SHALL BE IMMEDIATELY SEEDED (OR OTHERWISE STABILIZED) WHEN NO ACTIVITY IS EXPECTED TO OCCUR WITHIN FIVE (5) CALENDAR DAYS.
19. PRIOR TO ANY MAJOR LAND DISTURBANCE ACTIVITY, A LAND DISTURBANCE PERMIT FROM THE STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES WILL BE REQUIRED.
20. SEDIMENT SHALL BE WASHED FROM ALL VEHICLES AT WASH DOWN STATION PRIOR TO LEAVING THE SITE. NO TRACKING OF MUD ONTO CITY OF WILDWOOD ROADS SHALL BE ALLOWED.
21. THE PERMITTEE SHALL AMEND THE STORM WATER POLLUTION PREVENTION PLAN WHENEVER:
    - DESIGN OPERATION OR MAINTENANCE OF BMP IS CHANGED
    - DESIGN OF THE CONSTRUCTION PROJECT IS CHANGED THAT COULD SIGNIFICANTLY AFFECT THE QUALITY OF THE STORM WATER DISCHARGES.
    - SITE OPERATORS INSPECTIONS INDICATE DEFICIENCIES IN THE SWPPP OR ANY BMP
    - INSPECTIONS BY THE CITY OR BY MoDNR INDICATE DEFICIENCIES IN THE SWPPP OR ANY BMP
    - THE SWPPP IS DETERMINED TO BE INEFFECTIVE IN SIGNIFICANTLY MINIMIZING OR CONTROLLING EROSION OR EXCESSIVE SEDIMENT DEPOSITS IN STREAMS OR LAKES.
    - THE SWPPP IS DETERMINED TO BE INEFFECTIVE IN PREVENTING POLLUTION OF WATERWAYS FROM CONSTRUCTION WASTE, CHEMICALS, FUELING FACILITIES, CONCRETE TRUCK WASHOUT, TOXIC OR HAZARDOUS MATERIALS, SITE LITTER OR ANY OTHER SUBSTANCES OR WASTES LIKELY TO HAVE AN ADVERSE IMPACT ON WATER QUALITY.
    - THE TOTAL SETTLEABLE SOLIDS FROM A STORM WATER OUTFALL EXCEEDS 1/2 (0.5) ml/L/hr IF DISCHARGE IS WITHIN THE PRESCRIBED PROXIMITY OF A "VALUABLE RESOURCE WATER" AS DEFINED BY MoDNR.
    - THE TOTAL SETTLEABLE SOLIDS FROM A STORM WATER OUTFALL EXCEEDS 2 1/2 ml/L/hr FOR ANY OTHER OUTFALL
    - THE CITY OR THE MoDNR DETERMINES VIOLATIONS OF WATER QUALITY STANDARDS MAY OCCUR OR HAVE OCCURRED.



LEGEND

- AREA INLET/CURB INLET
- MANHOLE
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- CO CLEAN OUT
- LS LIGHT STANDARD
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- BUSH
- SIZE DECIDUOUS TREE
- SIZE CONIFEROUS TREE

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STOP! Call Before you DIG
1-800-344-7483
TOLL FREE
State Law requires 2 days advance notice. "the law in the State of Missouri defines emergency excavation as one preventing danger to life, health, or property."
MISSOURI ONE-CALL SYSTEM INC.
10223 NORTHEAST DR.
JEFFERSON CITY, MO 65109

North

40' 0' 40' 80'
SCALE: 1" = 40'

SILTATION CONTROL DEVICE

AREAS TO BE SEEDED & MULCHED, SEE LANDSCAPE PLAN & SPECS.

DESCRIPTION OF ACTIVITIES

CLEARING AND GRADING FOR A NEW PARKING FACILITIES, SIDEWALKS, SHELTER & PLAYGROUND AREA FOR RECREATION PARK.

ANTICIPATED ACTIVITY SCHEDULE

	ACTIVITY 2013	May	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec
1	BEGIN PROJECT								
2	INSTALL SEDIMENT CONTROLS								
3	CLEARING AND GRADING								
4	GRASS (TEMP.) (PERM.)								
5	MAINTAIN EROSION CONTROL								
6	CLEAN UP								
7	END PROJECT								

BMP SUMMARY TABLE

BMP Description	Temporary	Permanent	Quantity
Construction Entrance	X		1 ea.
Wash Down Station	X		1 ea.
Silt Fence	X		348 LI.
Seeding & Mulching	X	X	4,545 s.y.

SWPPP CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS STORM WATER POLLUTION PREVENTION PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS AND REGULATIONS OF ST. LOUIS COUNTY, THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, AND THE GENERAL PERMIT REQUIREMENTS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY. TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION CONTAINED IN THIS PLAN IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR KNOWINGLY SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT FOR THESE VIOLATIONS.

Signature: _____ Date: _____

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SHEET TITLE

Sediment & Erosion Control Plan

JOB NUMBER

10015

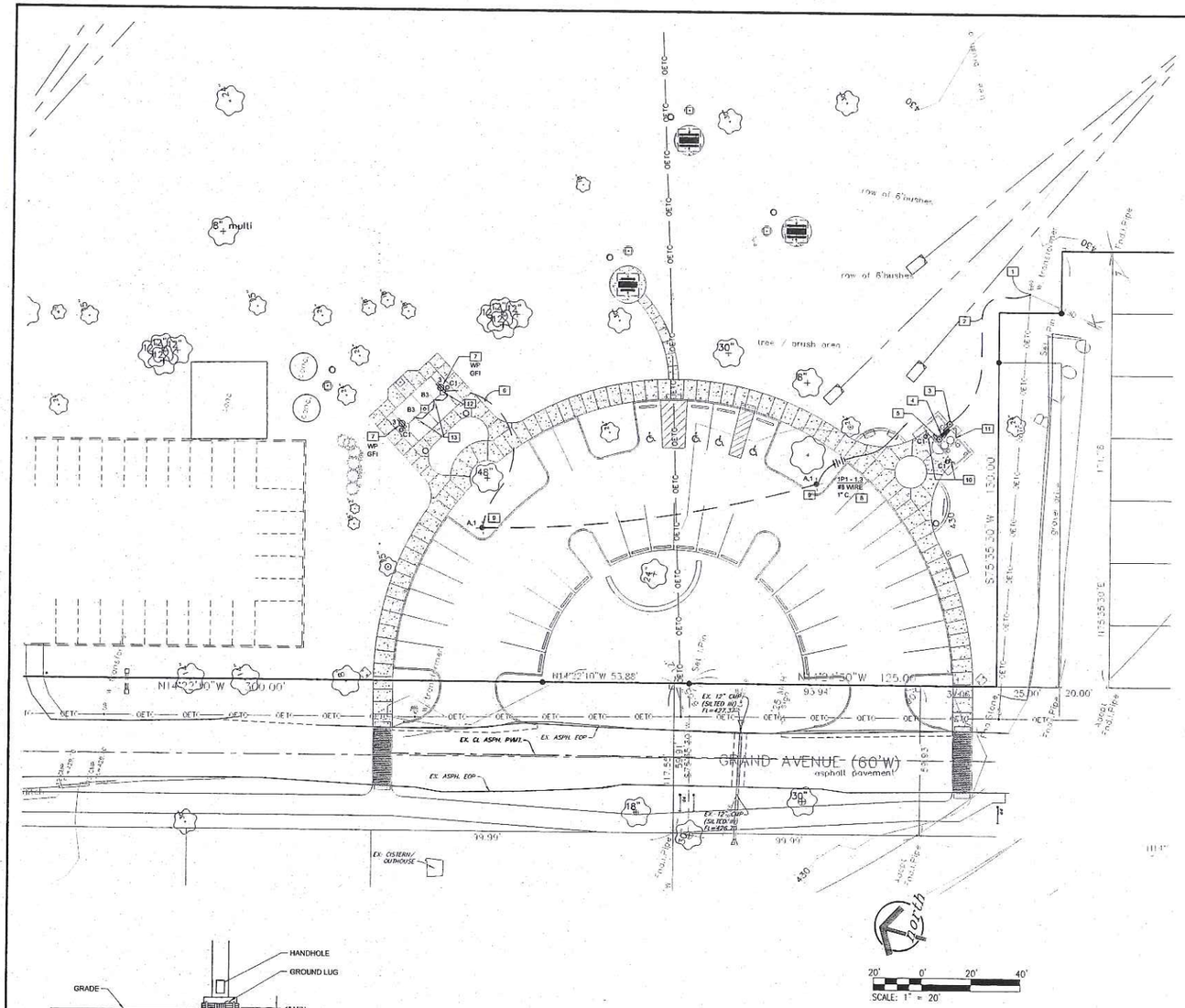
DATE 02/08/16 DRAWN BY DWD

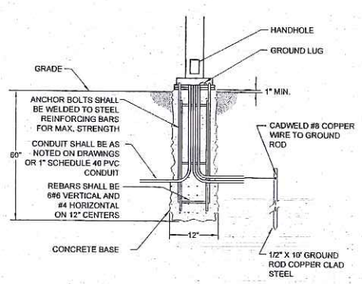
REVISION

- -

SHEET NUMBER

SWPP





FIXTURE TYPE 'A' BASE DETAIL

SCALE: NONE

NOTE: Underground facilities, structures, and utilities have been plotted from best available records, therefore the relationship between proposed work and existing facilities, structures, and utilities must be considered approximate, and it is the contractors responsibility to determine their exact location and the existence of any not shown.

KEYED NOTES: (THIS DRAWING ONLY)

1. EXISTING AMEREN U.E. POWER POLE AND TRANSFORMER.
2. PROVIDE 4# 3 & 1# #G., 1 ½" CONDUIT FROM AMEREN POWER POLE. RUN FROM AMEREN U.E. POLE TO AMEREN U.E. METER MOUNTED ON WALL OF RESTROOM BUILDING. ALL ELECTRICAL INSTALLATION SHALL CONFORM TO AMEREN U.E. REQUIREMENTS.
3. AMEREN U.E. METER MOUNTED ON WALL OF RESTROOM BUILDING.
4. PANELBOARD '1P1' INCLUDED AS PART OF PRE MANUFACTURED RESTROOM BUILDING. PROVIDE CONNECTION OF THE PANELBOARD FROM THE AMEREN U.E. METER 4 #3, & 1 #8G., 1 ½" C.
5. PROVIDE A TORK # 71202-18 ASTRONOMIC TIME CLOCK FOR CONTROL OF THE SITE LIGHTING. RUN CIRCUIT #1 THRU TIME CLOCK FOR CONTROL.
6. ROUTE CONDUIT WITHIN PAVILION STRUCTURE TO THE LIGHTING, FAN AND OUTLET FIXTURES. COORDINATE WITH PAVILION MANUFACTURER TO ACCOMMODATE INTERNAL ROUTING. FIXTURES TO BE SURFACE MOUNTED ON STRUCTURAL STEEL FRAME OF PAVILION. FIXTURE BOXES TO BE PAINTED SAME COLOR AS MOUNTING SURFACE.
7. PROVIDE TAMPER RESISTANT & WEATHER RESISTANT GROUND FAULT RECEPTACLES ON PAVILION STRUCTURE AT 18" ABOVE. SEE DETAIL ON DRAWING D3. DRESS OUT CONDUIT PER ARCHITECTURAL DETAIL.
8. TRANSITION FROM #8 WIRE TO #10 WIRE FOR TERMINATION TO LOADS. #8 WIRE PROVIDED FOR VOLTAGE DROP DUE TO LOAD DISTANCE FROM PANELBOARD. PROVIDE PROPER SIZE BOX FOR WIRE CAPACITY.
9. SITE LIGHTING FIXTURE (TYPE 'A'). SEE BASE DETAIL ON THIS DRAWING.
10. WALL MOUNTED LIGHTING FIXTURES TO BE INSTALLED CENTERED OVER DOORS ON CONTRACTOR FRAMED FRONT WALL EXTENSION ABOVE CONCRETE PORTION OF PREMANUFACTURED PORTION OF RESTROOM BUILDING AS INDICATED ON RESTROOM DETAIL SHEET D4.
11. ALL ELECTRICAL UTILITIES WITHIN THE RESTROOM BUILDING SHALL BE PROVIDED AND PREWIRED TO PANELBOARD '1P1' BY THE RESTROOM MANUFACTURER.
12. LOCATE FAN CONTROLLER ON PAVILION SUPPORT STRUCTURE.
13. MOUNT CEILING FANS AND ROUTE CONDUIT IN PAVILION PER MANUFACTURER AND ARCHITECTURAL DETAILS. SEE NOTE #12 FOR FAN CIRCUITING AND CONTROLS.

GENERAL NOTES: (THIS DRAWING ONLY)

1. ALL WORK SHALL CONFORM TO THE ENFORCED 2008 NEC & ALL LOCAL CODES THAT APPLY.
2. ALL CONDUIT BELOW GRADE SHALL BE SCHEDULE 40 PVC AND RGS ABOVE GRADE.
3. ALL WIRING SHALL BE "RHW" 90°C.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL UNDERGROUND CONDUIT AND FEEDERS IN CONDUIT FROM AMEREN POWER POLE TO NEW SERVICE PANEL '1P1'. THE ELECTRICAL CONTRACTOR SHALL STUB THE CONDUIT UP THE AMEREN POLE APPROX. 3' AND COIL UP APPROX. 30' OF CABLE AT THE POLE BASE FOR AMEREN TO RUN UP THE POLE AND TERMINATE ON THE POLE MOUNTED TRANSFORMER. AMEREN WILL PROVIDE THE CONDUIT UP THE POLE.
5. THE ELECTRICAL CONTRACTOR WILL PROVIDE AND INSTALL THE METER BASE, ALL WIRING THRU THE METER BASE TO THE NEW SERVICE PANEL. AMEREN WILL PROVIDE AND INSTALL THE METER.
6. ALL WORK SHALL CONFORM TO THE AMEREN U.E. REQUIREMENTS.
7. AMEREN U.E. CHARGES SHALL BE PAID FOR BY THE OWNER AND NOT INCLUDED IN THE BID.

PANEL: 1P1

CAPACITY: 100	VOLTAGE: 240/120V	LOCS: MB	MB:	KAIC: 10	MOUNT:	SURFACE:

LOAD	W	C	R	B	L	TYP	NO	C	NO	TYP	L	B	R	C	W	LOAD
2 TON, 3C, 4 TYPE 'C' FIXTURE					0.25	20/1	1	A	2	20/1						SPARE
2 GFI RECE. & 2 FANS				0.5		20/1	3	B	4	20/1						SPARE
SPARE						20/1	5	A	6	20/1						SPARE
SPARE						20/1	7	B	8	20/1						SPARE
SPARE						20/1	9	A	10	20/1						SPARE
						20/1	11	B	12	20/1						
						20/1	13	A	14	20/1						
						20/1	15	B	16	20/1						
						20/1	17	A	18	20/1						
						20/1	19	B	20	20/1						
						20/1	21	A	22	20/1						
						20/1	23	B	24	20/1						
						20/1	25	A	26	20/1						
						20/1	27	B	28	20/1						
						20/1	29	A	30	20/1						

LIGHTING LOAD X 125%=	0 KVA	1 AMPS
10KVA + 50% REMAINDER=	1 KVA	3 AMPS
NON-CONT. LOAD x 100%=	0 KVA	0 AMPS
CONTINUOUS LOAD x 125%=	0 KVA	0 AMPS
MOTORS + 25% LARGEST=	0 KVA	0 AMPS
TOTAL DEMAND=	1 KVA	4 AMPS

1. PANELBOARD SHALL BE SERVICE ENTRANCE RATED
2. PANELBOARD SHALL BE PROVIDED BY THE RESTROOM STRUCTURE MANUFACTURER.
3. QUANTITY AND SIZES OF BREAKERS IN PANELBOARD SHALL BE DETERMINED BY RESTROOM STRUCTURE MANUFACTURER. THE E.C. SHALL CONNECT TO 2-20A-1P BREAKERS IN PANEL FOR LOADS INDICATED. UTILIZE SPARE BREAKERS IN PANEL OR PROVIDE NEW 20A-1PCBS TO MATCH EXISTING IN SPACE.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER	MOUNTING (1)	FIXTURE / LAMP DATA: LAMP QUANTITY	SYSTEM WATTAGE (2)	LAMP TYPE (3)	BALLAST TYPE (4)	ORDERING CODE	VOLT	NOTES
A	SITE LIGHTING FIXTURE	USA-HS8PT318-ULED-111-80LED-NW-120-YORE-RAL-8005-T 4"POLE BRKTS 154-11	18' POLE	1	91	LED	NA	NA	120	EQUALS GARDCO OR K&H 2
B	SHELTER FAN	MINKA (SUNDOWNER) F968-BUA	CEILING	NA	NA	NA	NA	NA	120	
C	RESTROOM/SHELTER LIGHTING	LITHONIA LIGHTING - DLVTWM	W	1	15	LED	NA	NA	120	2

(1) MOUNTING
R - RECESSED
S - SURFACE
E - EXTERIOR
PM - POLE MOUNTED
W - WALL
P - PENDANT
G - GRADE

(2) SYSTEM WATTAGE
TOTAL POWER CONSUMPTION (IN WATTS) OF THE BASIS OF DESIGN FIXTURE

(3) LAMP TYPE
F - FLUORESCENT
CF - COMPACT FLUORESCENT
I - INCANDESCENT
LED - LIGHT EMITTING DIODE
MH - METAL HALIDE
HPS - HIGH PRESSURE SODIUM
FWF - FURNISHED WITH FIXTURE
PS - PULSE START

(4) BALLAST TYPE
NA - NOT APPLICABLE
BL - BI-LEVEL BALLAST (SEE SPECIFICATION)
PRS - PROGRAM RAPID START (SEE SPECIFICATION)
ACCEPTABLE BALLASTS FOR FLUORESCENT FIXTURES:
GENERAL ELECTRIC (ULTRA START) OR SYLVANIA (QUICKTRONIC)
PER SPEC

NOTE:
PROVIDE PRODUCT DATA SHEETS FOR LAMPS AND BALLASTS FOR EACH FIXTURE. SEE SPECIFICATION SECTION 16515.

1. PROVIDE FAN SPEED CONTROLLER MOUNTED ON PAVILION SUPPORT STRUCTURE.
2. LIGHTING SHALL BE CONTROLLED VIA TORK TIME CLOCK.

terraspec
LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE
5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718

Al Foster Trailhead Park

Grand Ave & 3rd St.
Wildwood, Missouri

OWNER

City of Wildwood

16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

SHEET TITLE

Site Electrical Plan

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

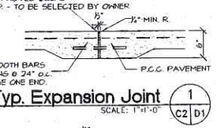
REVISION

- -

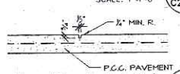
SHEET NUMBER

E1

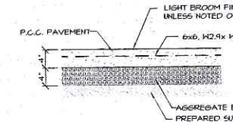
HOLD EXP. MAT. ½" BELOW FIN. CONC. SURFACE.
SEAL ALL EXP. JOINTS W/ POLYURETHANE, SELF-LEVELING SEALANT.
ASTM C920, CLASS 25, USES T, M AND A;
NR-200 UREXPAN BY PECORA CORP.
OR APPROVED EQUAL.
COLOR - TO BE SELECTED BY OWNER



Typ. Expansion Joint 1 (C2 D1)
SCALE: 1"=1'-0"

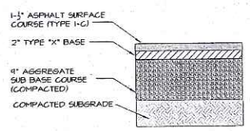


Typ. Tooled Joint 2 (C2 D1)
SCALE: 1"=1'-0"

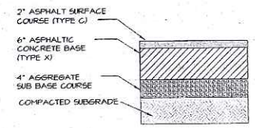


NOTE: ALL CONCRETE FOR WALKS AND PAV'T. TO BE 4,000 P.S.I. @ 28 DAYS.
ALL PAV'T. EDGES TO BE TOOLED TO ½" R.

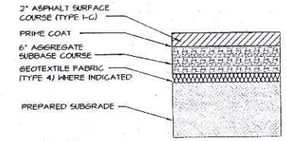
Typ. Concrete Pavement 3 (C2 D1)
SCALE: 1"=1'-0"



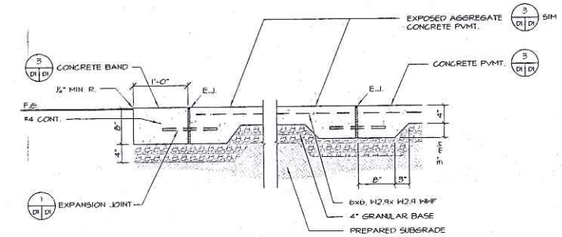
Asphalt Pavement 4 (C2 D1)
SCALE: 1"=1'-0"



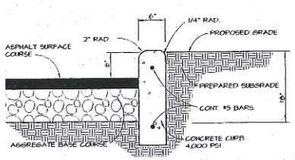
Entrance Pavement 5 (C2 D1)
(WITHIN R.O.W.)
SCALE: 1"=1'-0"



Asphalt Trail 6 (C2 D1)
SCALE: 1"=1'-0"

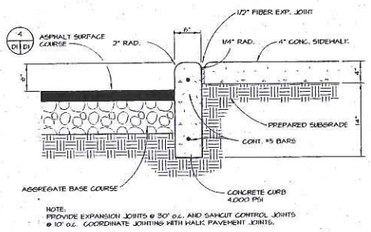


Exposed Agg. Concrete 7 (C2 D1)
SCALE: 1"=1'-0"



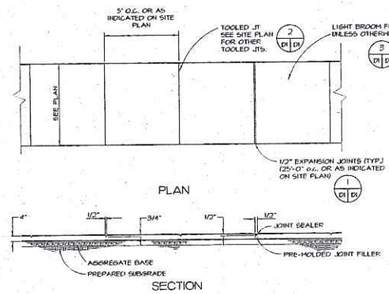
NOTE:
PROVIDE EXPANSION JOINTS @ 30' o.c. AND SAWCUT CONTROL JOINTS @ 10' o.c. COORDINATE JOINTING WITH WALK PAVEMENT JOINTS.

6" Vertical Concrete Curb 8 (C2 D1)
N.T.S.

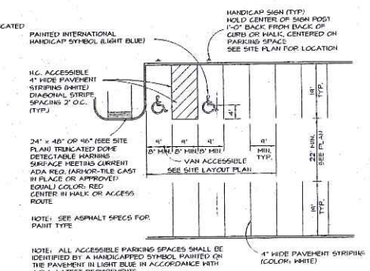


NOTE:
PROVIDE EXPANSION JOINTS @ 30' o.c. AND SAWCUT CONTROL JOINTS @ 10' o.c. COORDINATE JOINTING WITH WALK PAVEMENT JOINTS.

6" Vertical Concrete Curb With Sidewalk 9 (C2 D1)
N.T.S.

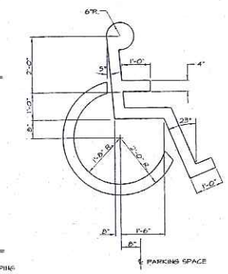


Concrete Sidewalk Detail 10 (C2 D1)
N.T.S.



NOTE: ALL ACCESSIBLE PARKING SPACES SHALL BE IDENTIFIED BY A HANDICAPPED SYMBOL PAINTED ON THE PAVEMENT IN LIGHT BLUE IN ACCORDANCE WITH A.D.A. LATEST REQUIREMENTS.

Typical Parking Detail 11 (C2 D1)
N.T.S.
NOTE: FOR REFERENCE SEE SITE LAYOUT PLAN

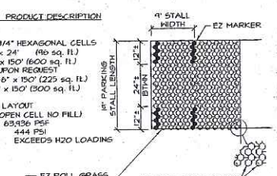


International Handicap Symbol 12 (C2 D1)
N.T.S.

EZ ROLL™ GRASS PAVER PRODUCT DESCRIPTION

PANEL SIZE - 4' x 24' x 1"
CELLS PER PANEL-(12) - 2-1/4" HEXAGONAL CELLS
STOCK ROLL SIZES - 4' x 24' (96 sq. ft.)
4' x 150' (600 sq. ft.)
CUSTOM SIZES AVAILABLE UPON REQUEST
1'-6" x 150' (225 sq. ft.)
2' x 150' (300 sq. ft.)

NESTED HONEYCOMB CELL LAYOUT
COMPRESSIVE STRENGTH (OPEN CELL NO FILL) 63,936 PSF
444 PSI
EXCEEDS H20 LOADING

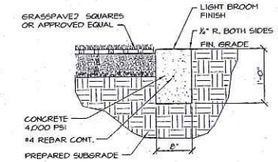


SOIL FILL LEVELS INSIDE PAVER GRIDWORK AFTER HEAVY WATER DOWN. THIS IS THE ACTUAL SOD PLANTING LEVEL.

SOIL INFILL: SANDY LOAM TOPSOIL W/ STARTER FERTILIZER PER LANDSCAPE SPECS.

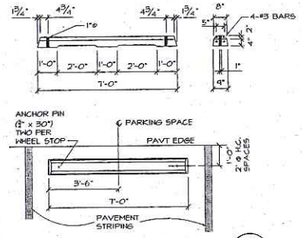
GRASS SEED OR SOD: SEE LANDSCAPE SPECS
BASE BID - SEED
ADD ALT. - SOD

Grass Paver Unit 13 (C2 D1)
SCALE: 1"=1'-0"
ADD ALT. #1

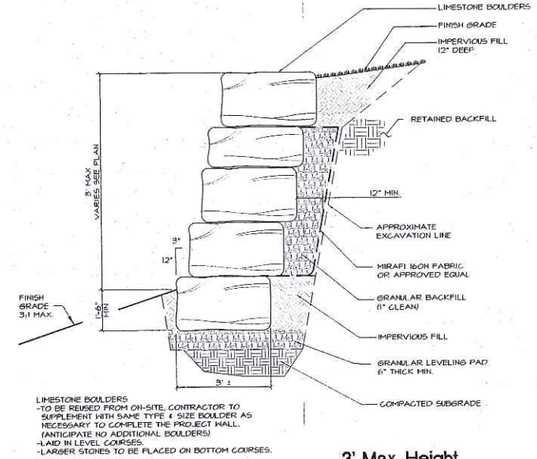


NOTE:
PROVIDE EXPANSION JOINTS @ 30' o.c. AND SAWCUT CONTROL JOINTS @ 10' o.c.

Flush Concrete Curb 14 (C2 D1)
SCALE: 1"=1'-0"
ADD ALT. #1

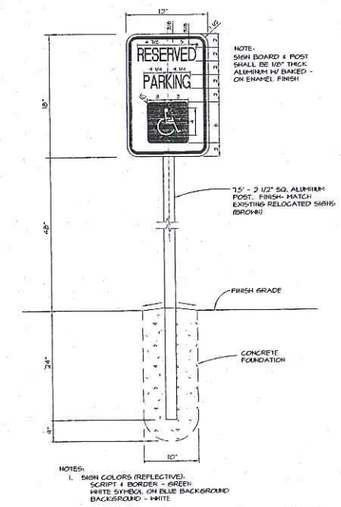


Typ. Conc Wheel Stops 15 (C2 D1)
SCALE: 3/8"=1'-0"



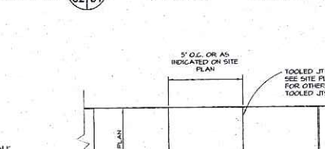
LIMESTONE BOULDERS
-TO BE REUSED FROM ON-SITE. CONTRACTOR TO SUPPLEMENT WITH SAME TYPE & SIZE BOULDER AS NECESSARY TO COMPLETE THE PROJECT WALL. (ANTICIPATE NO ADDITIONAL BOULDERS)
-LAID IN LEVEL COURSES.
-LARGER STONES TO BE PLACED ON BOTTOM COURSES.

3' Max. Height
Typical Boulder Wall Section-Non Reinforced 17 (C2 D1)
SCALE: 1/2"=1'-0"

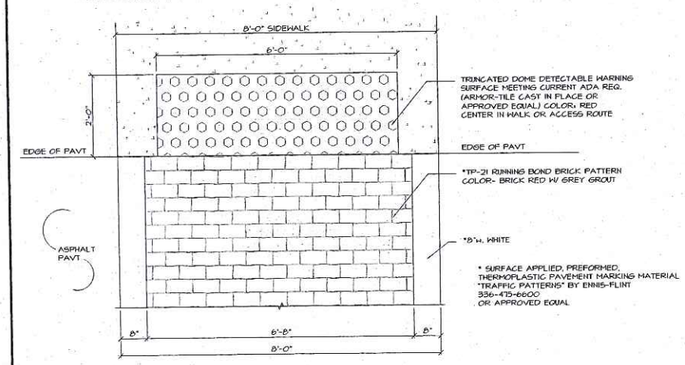


NOTES:
1. SIGN COLORS (REFLECTIVE).
SCRIPT & BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

Handicap Sign Detail 18 (C2 D1)
N.T.S.

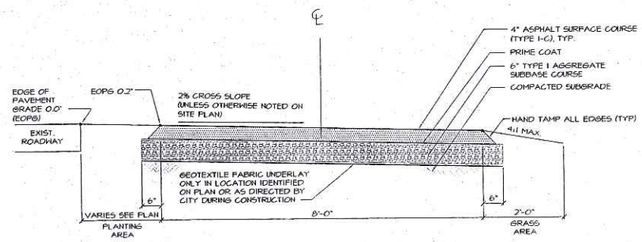


Picnic Table Anchor 16 (C2 D1)
SCALE: 3"=1'-0"

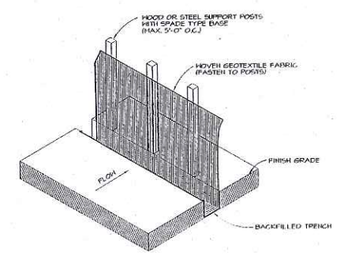


* SURFACE APPLIED, PREFORMED, THERMOPLASTIC PAVEMENT MARKING MATERIAL "TRAFFIC PATTERNS" BY ENNIS-FLINT 336-475-6600 OR APPROVED EQUAL

Cross Walk Detail 19 (C2 D1)
SCALE: 3/4"=1'-0"



Typ. Trail Pavt Cross Section 20 (C2 D1)
N.T.S.



Siltation Control Device 21 (C2 D1)
N.T.S.

LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE

terraspec

5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718

Al Foster Trailhead Park

Grand Ave & 3rd St.
Wildwood, Missouri

OWNER

City of Wildwood

16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

SHEET TITLE

Details

JOB NUMBER

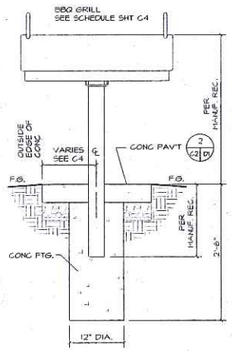
10015

DATE 02/08/16 DRAWN BY DWD

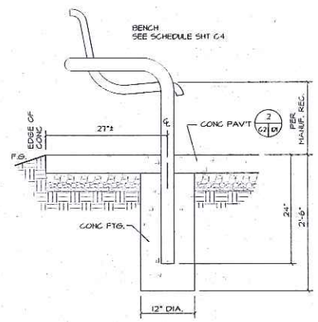
REVISION

SHEET NUMBER

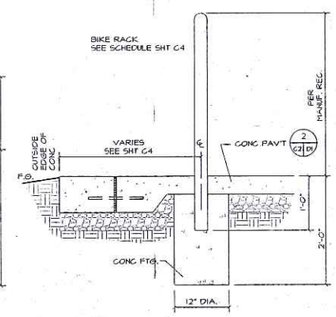
D1



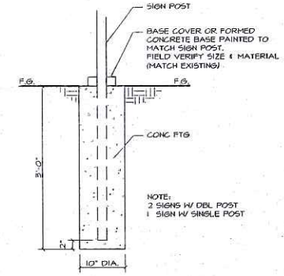
BBQ Pit Ftg Detail (1 | C4 | D2)
SCALE: 1" = 1'-0"



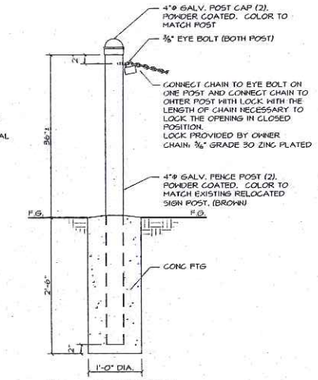
Bench Ftg Detail (2 | C4 | D2)
SCALE: 1" = 1'-0"



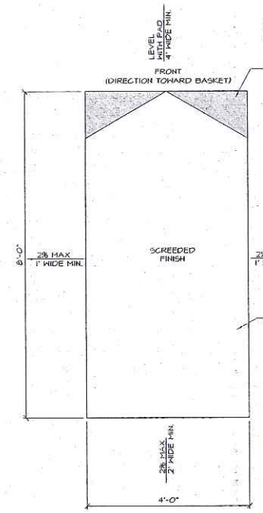
Bike Rack Ftg Detail (3 | C4 | D2)
SCALE: 1" = 1'-0"



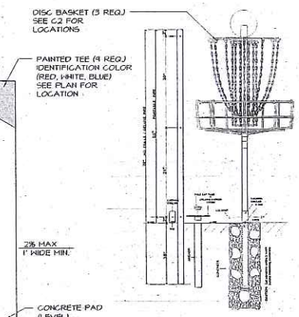
Relocated Sign Ftg Detail (4 | C2 | D2)
SCALE: 1" = 1'-0"



Access Control Gate Post Detail (5 | C2 | D2)
SCALE: 1" = 1'-0"
ADD ALT. #1



Disc Golf Tee (6 | C2 | D2)
SCALE: 3/4" = 1'-0"
ADD ALT. #5



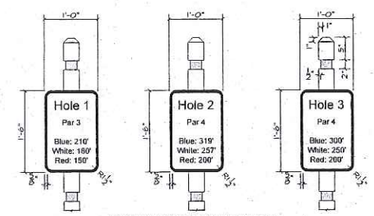
DISC GOLF BASKETS

MODEL : MACH III
REMOVABLE DISC POLE/ DISC BASKET WITH DELUXE MOUNTING OPTION. STOCK IN HOUSE POWDER COATING "BLAZE ORANGE"

MANUFACTURER:
DISC GOLF ASSOCIATION
13 HANSER WAY
WATSONVILLE, CA 95076
831-722-6031

DISTRIBUTOR:
DISC UNLIMITED INC.
7 NORTH 1ST ST.
HERRINGTON, KS 67449
785-258-2414

Disc Golf Basket (7 | C2 | D2)
SCALE: 3/4" = 1'-0"
ADD ALT. #5



12"x18" STANDARD METAL SIGN PANELS 0.080" THICK, ALUMINUM, HIGH INTENSITY PRISMATIC. INSTALLATION HARDWARE TO BE STAINLESS STEEL

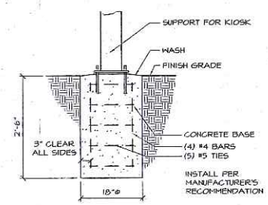
⅜" DIA. MOUNTING HOLES (2 REQUIRED)

COLORS:
TEXT:
HOLE # - BLACK
PAR # - BLACK
BLUE: xxx - BLUE
WHITE: xxx - WHITE
RED: xxx - RED

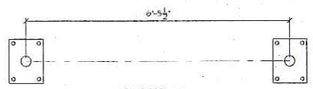
BACKGROUND - YELLOW
SIGN BACK - NO COLOR

NOTE:
- COORDINATE LETTER SIZE AND STYLE WITH SIGN MANUFACTURER.
- VERIFY TEE TO HOLE DISTANCE.
- SIGNS TO BE FIELD LOCATED BY LA.

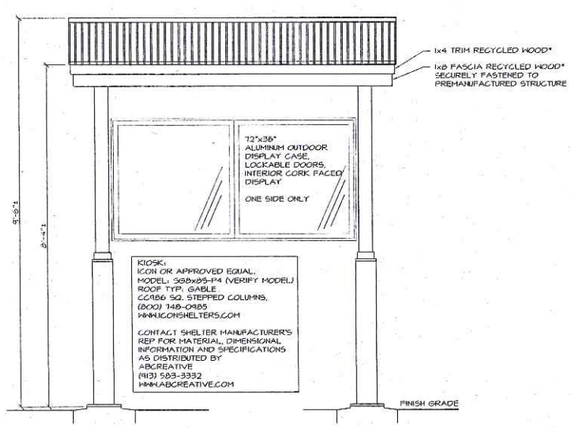
Disc Golf Tee + Rules Signs (8 | C2 | D1)
SCALE: 1"=1'-0"



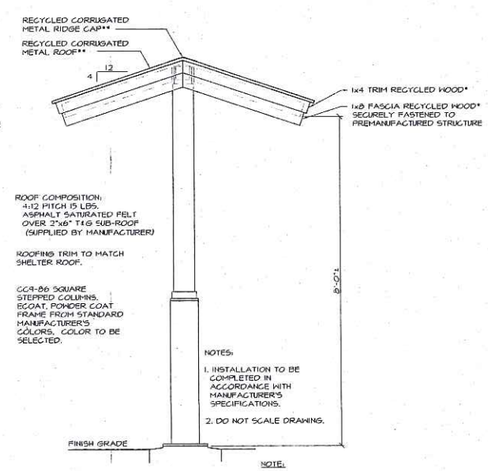
KIOSK FTG DETAIL



BASE PLAN



FRONT ELEVATION



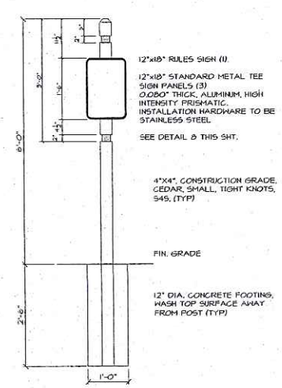
SIDE ELEVATION

NOTE:

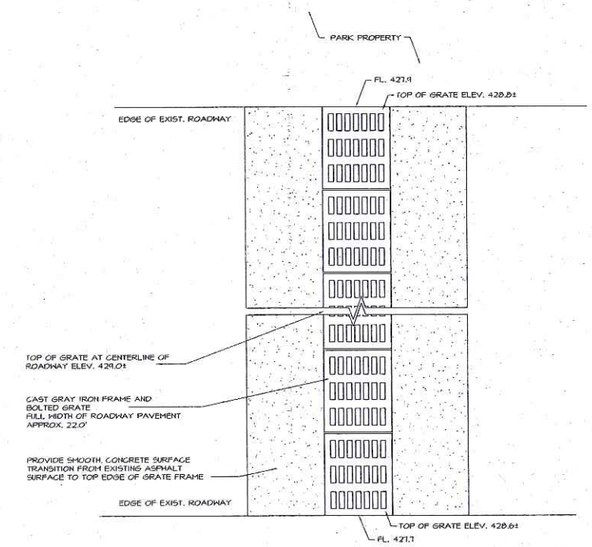
* OWNER SUPPLIED 1x8 WEATHERED, OAK BOARDS. VARIOUS LENGTHS TO BE UTILIZED FOR TRIM AND FASCIA ON ALL 4x4 MINI SHELTERS AND 2x6x6 MAIN SHELTER. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

** PRE-MANUFACTURED STRUCTURE TO BE SUPPLIED WITHOUT ROOF SURFACE MATERIAL. INSTALLATION CONTRACTOR TO UTILIZE OWNER SUPPLIED CORRUGATED METAL SURFACE. INSTALL PER SAME DETAILS & PROCEDURES AS REQUIRED BY MANUFACTURER SUPPLIED ROOFING SPECIFIED FOR MAIN SHELTER AND RESTROOM BUILDING.

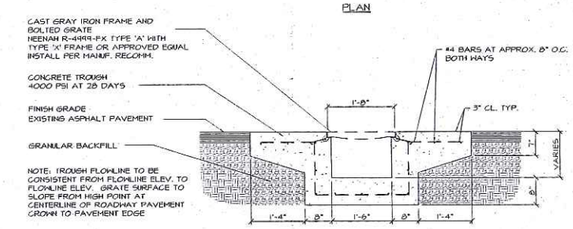
Information Board (9 | C2 | D2)
SCALE: 3/4" = 1'-0"
ADD ALT. #3



Disc Golf Sign/ Post (10 | C2 | D2)
SCALE: 3/4"=1'-0"



PLAN



SECTION AA

Grated Drainage Trough Detail (11 | C2 | D2)
SCALE: 3/4"=1'-0"
ADD ALT. #6

terraspec
LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE
5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718

Al Foster Trailhead Park

Grand Ave & 3rd St.
Wildwood, Missouri

OWNER
City of Wildwood
16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

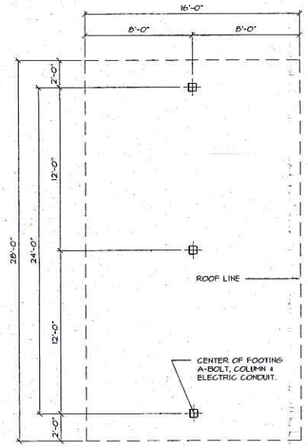
SHEET TITLE
Details

JOB NUMBER
10015

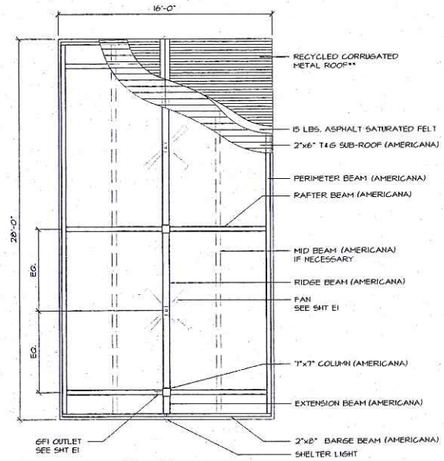
DATE 02/08/16 DRAWN BY DWD

REVISION
-

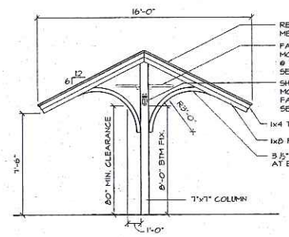
SHEET NUMBER
D2



Layout Plan
SCALE: 1/4" = 1'-0"



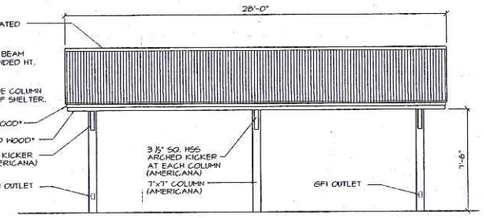
Plan View
SCALE: 1/4" = 1'-0"



End Elevation
SCALE: 1/4" = 1'-0"

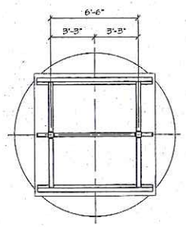
* OWNER SUPPLIED 1x8 WEATHERED, OAK BOARDS, VARIOUS LENGTHS TO BE UTILIZED FOR TRIM AND FASCIA ON ALL 4x4 MINI SHELTERS AND 28x16 MAIN SHELTER. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

** OWNER SUPPLIED 2'x10' WEATHERED, CORRUGATED METAL PANELS TO BE UTILIZED FOR ROOFING ON ALL 4x4 MINI SHELTERS AND 28x16 MAIN SHELTER. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

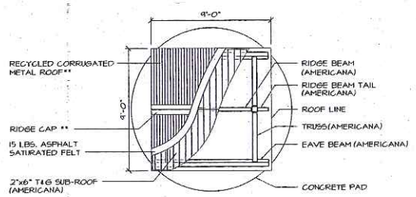


Side Elevation
SCALE: 1/4" = 1'-0"

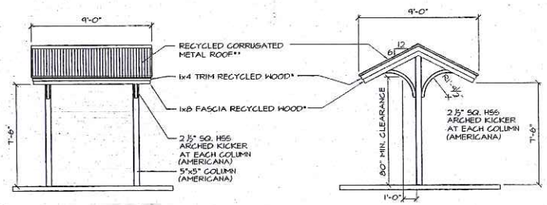
28'x16' Main Shelter (1 / C2 D3)
SCALE: 1/4" = 1'-0"



Layout Plan
SCALE: 1/4" = 1'-0"



Plan View
SCALE: 1/4" = 1'-0"



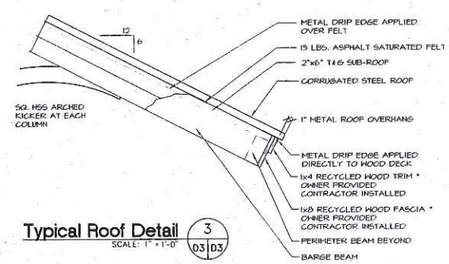
Side Elevation
SCALE: 1/4" = 1'-0"

End Elevation
SCALE: 1/4" = 1'-0"

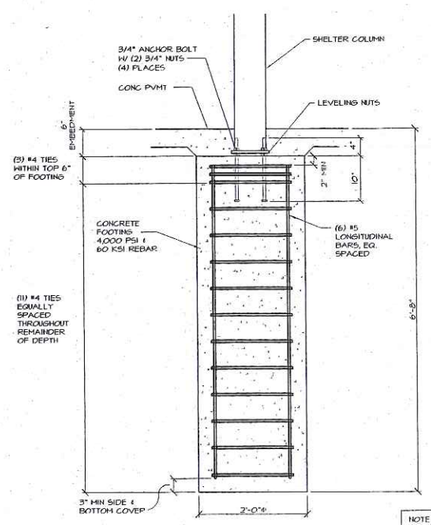
* OWNER SUPPLIED 1x8 WEATHERED, OAK BOARDS, VARIOUS LENGTHS TO BE UTILIZED FOR TRIM AND FASCIA ON ALL 4x4 MINI SHELTERS AND 28x16 MAIN SHELTER. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

** OWNER SUPPLIED 2'x10' WEATHERED, CORRUGATED METAL PANELS TO BE UTILIZED FOR ROOFING ON ALL 4x4 MINI SHELTERS AND 28x16 MAIN SHELTER. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

9'X9' Mini Shelter (2 / C2 D3)
SCALE: 1/4" = 1'-0"

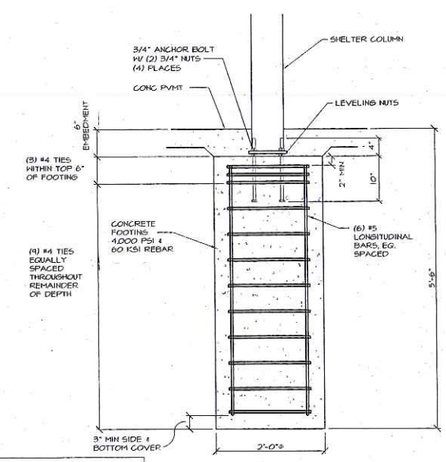


Typical Roof Detail (3 / D3 D3)
SCALE: 1" = 1'-0"



28'x16' Shelter
Column Base-Plate / Footing Detail (4 / D3 D3)
SCALE: 1" = 1'-0"

NOTE:
SOILS NEED TO BE VERIFIED AND CAPABLE OF HANDLING 2,000 PSF AND HAVE ALLOWABLE LATERAL PASSIVE SOIL RESISTANCE OF 40 PSI/FT.



9'x9' Shelter
Column Base-Plate / Footing Detail (5 / D3 D3)
SCALE: 1" = 1'-0"

LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE

terraspec

5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718

Al Foster Trailhead Park
Grand Ave & 3rd St.
Wildwood, Missouri

OWNER

City of Wildwood

16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

SHEET TITLE

Shelter Details

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

REVISION

- -

SHEET NUMBER

D3

GENERAL NOTES

1. SHELTER DESIGN
   A. THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS SHALL BE PROHIBITED AS INCREASED WIND FORCES MAY RESULT.
2. FOUNDATION
   A. THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND CAPABLE OF SUPPORTING 1000 PSF VERTICAL BEARING PRESSURE.
   B. FOUNDATION DESIGN SHOWN IS A RECOMMENDATION ONLY. OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE DESIGNED BY OTHERS.
3. CONCRETE
   A. COMPRESSION STRENGTH OF ALL REINFORCED CONCRETE SHALL NOT BE LESS THAN 2500 PSI AT 28 DAYS.
   B. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4.
   C. MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 2", UNLESS NOTED OTHERWISE.
   D. ANCHOR RODS SHALL BE F1554 GRADE 36 ROD, HEADED, OR WITH HEAVY HEX NUT TACKED TO ROD.
4. STRUCTURAL STEEL
   A. STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
   B. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B.
   C. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE MATERIAL BEING WELDED.
   D. WELDING ELECTRODES SHALL BE E70XX.
   E. STRUCTURAL STEEL COMPONENTS SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATION.
6. ROOF DECK
   A. ROOF DECK SHALL BE TONGUE-AND-GROOVE WOOD, SOUTHERN YELLOW PINE OR WESTERN RED CEDAR, #1 GRADE OR BETTER, KILN DRIED, 2x6 NOMINAL DIMENSION.
   B. TONGUE-AND-GROOVE DECK SHALL BE COVERED BY ROOFING MATERIALS BY OTHERS AS NOTED ON THE DRAWING.
7. FASTENERS
   A. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325 OR A307 (SEE DETAILS).
   B. HIGH STRENGTH BOLTS SHALL BE HOT DIP GALVANIZED.
   C. ALL BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION AS DEFINED IN THE 2004 RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
8. SHOP FABRICATION AND FIELD ASSEMBLY
   A. ALL STRUCTURAL STEEL COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.
   B. ALL SHOP WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS.
   C. ALL SHOP WELDS SHALL BE IN STRICT ACCORDANCE WITH THE STRUCTURAL WELDING CODE AWS D1.1 OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ALL STRUCTURAL WELDS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF "PRE-QUALIFIED" WELDED JOINTS. ALL WELDING SHALL CONFORM TO AWS A5.18 - ER70S-6 SERIES E70XX ELECTRODES - LOW HYDROGEN
   D. FIELD WELDING SHALL NOT BE REQUIRED.

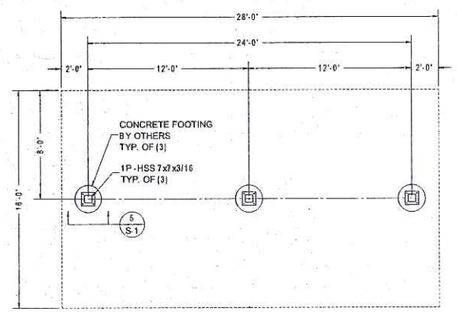
BASIS OF DESIGN

DESIGN PARAMETERS	
ROOF LIVE LOAD	20 PSF
GROUND SNOW LOAD	20 PSF
DESIGN ROOF DEAD LOAD	5 PSF
WIND CRITERIA / EXPOSURE C	90 MPH
SOIL DESIGN BEARING STRENGTH	1000 PSF
CODES	2009 IBC ASCE 7-05

BUILDING DATA	
OCCUPANCY CLASSIFICATION	A-3 (NONSEPARATE USE)
CONSTRUCTION TYPE	TYPE IIB
FLOOR AREA	448 SQ. FT.
OCCUPANCY LOAD	7 SQ. FT. / OCCUPANT = 64 OCCUPANTS / SHELTER

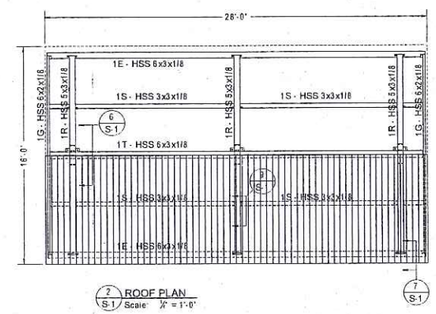
DESIGN CRITERIA

WIND DESIGN CRITERIA	
BASIC WIND SPEED	90 MPH
WIND IMPORTANCE FACTOR	$I_w = 1.0$
OCCUPANCY CATEGORY	II
WIND EXPOSURE	C
INTERNAL PRESSURE COEFFICIENT	N/A (OPEN STRUCTURE)
DESIGN WIND PRESSURE (COMPONENTS & CLADDING)	SEE CALCS
SEISMIC DESIGN CRITERIA	
SEISMIC IMPORTANCE FACTOR	$I_E = 1.0$
OCCUPANCY CATEGORY	II
SPECTRAL RESPONSE ACCELERATION, 0.2 SECOND	$S_s = 0.505$
SPECTRAL RESPONSE ACCELERATION, 1.0 SECOND	$S_1 = 0.155$
SITE CLASS	D (ASSUMED)
SPECTRAL RESPONSE COEFFICIENT, S_{DS}	0.470
SPECTRAL RESPONSE COEFFICIENT, S_{D1}	0.225
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC FORCE RESISTING SYSTEM	CANTILEVERED COLUMN SYSTEM
DESIGN BASE SHEAR	$V = C_sW$
RESPONSE MODIFICATION FACTOR	$R = 1.25$
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE



1 S-1 FOUNDATION PLAN
Scale: 3/8" = 1'-0"

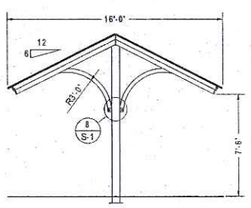
NOTE: T&G WOOD SUB-ROOF (BY AMERICANA) SHALL BE COVERED BY ASPHALT SATURATED FELT AND CORRUGATED METAL ROOF BY OTHERS. RECOMMENDED ATTACHMENT FASTENTER: #10 x 1" LAG SCREW.



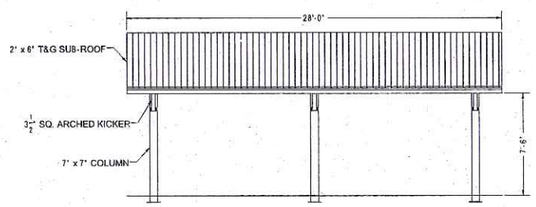
2 S-1 ROOF PLAN
Scale: 3/8" = 1'-0"

NOT FOR CONSTRUCTION

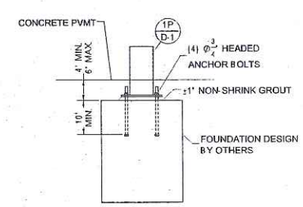
THIS DRAWING FOR ESTIMATING PURPOSES ONLY



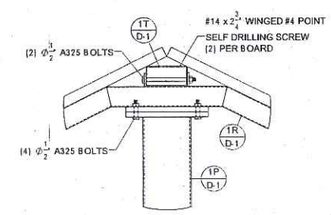
3 S-1 END ELEVATION
Scale: 3/8" = 1'-0"



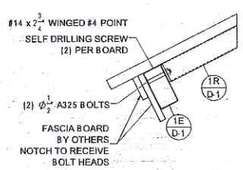
4 S-1 SIDE ELEVATION
Scale: 3/8" = 1'-0"



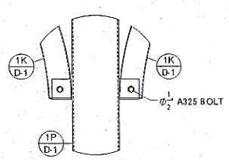
5 S-1 FOUNDATION SECTION
Scale: 3/8" = 1'-0"



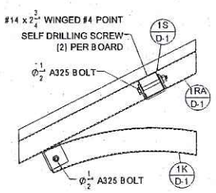
6 S-1 RAFTER TO POST CONNECTION
Scale: 1 1/2" = 1'-0"



7 S-1 EDGE BEAM TO RAFTER CONNECTION
Scale: 1 1/2" = 1'-0"



8 S-1 KICKER TO POST CONNECTION
Scale: 1 1/2" = 1'-0"



9 S-1 PURLIN TO RAFTER CONNECTION
Scale: 1 1/2" = 1'-0"

SEAL

PRELIMINARY
THIS DRAWING IS FOR ESTIMATING USE ONLY. NOT INTENDED FOR CONSTRUCTION USE

TITLE

16'-0" x 28'-0"
CHEROKEE SHELTER
WILDWOOD, MO 63038

AMERICANA BUILDING PRODUCTS
#2 INDUSTRIAL DRIVE · SALEM, IL 62881
(800) 851-0865 · www.americana.com

terraspec
LAND PLANNING
RECREATION PLANNING AND DESIGN
LANDSCAPE ARCHITECTURE
5030 GRIFFIN ROAD
ST. LOUIS, MO 63128
(314)984-8211 FAX(314)843-1718

Al Foster Trailhead Park
Grand Ave & 3rd St.
Wildwood, Missouri

DRAWN BY	AY
CHECKED BY	
SCALE	SEE DETAILS
DATE	12/31/2015
REVISE DATE	12/8/2015
P.O. NO.	
JOB NO.	
DRAWING NO.	
SHEET	S-1 OF 1 SHEETS

OWNER
City of Wildwood
16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

SHEET TITLE
16x28 Shelter

JOB NUMBER
10015

DATE 02/08/16 DRAWN BY DWD

REVISION
-

SHEET NUMBER
D3A

GENERAL NOTES

1. SHELTER DESIGN
   A. THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS SHALL BE PROHIBITED AS INCREASED WIND FORCES MAY RESULT.
2. FOUNDATION
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   B. FOUNDATION DESIGN SHOWN IS A RECOMMENDATION ONLY. OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE DESIGNED BY OTHERS
3. CONCRETE
   A. COMPRESSION STRENGTH OF ALL REINFORCED CONCRETE SHALL NOT BE LESS THAN 2500 PSI AT 28 DAYS.
   B. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4
   C. MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 2", UNLESS NOTED OTHERWISE.
   D. ANCHOR RODS SHALL BE F1554 GRADE 36 ROD, HEADED, OR WITH HEAVY HEX NUT TACKED TO ROD.
4. STRUCTURAL STEEL
   A. STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
   B. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B.
   C. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE MATERIAL BEING WELDED
   D. WELDING ELECTRODES SHALL BE E70XX.
   E. STRUCTURAL STEEL COMPONENTS SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-92 SPECIFICATION
6. ROOF DECK
   A. ROOF DECK SHALL BE TONGUE-AND-GROOVE WOOD. SOUTHERN YELLOW PINE OR WESTERN RED CEDAR, #1 GRADE OR BETTER, KILN DRIED, 2x6 NOMINAL DIMENSION.
   B. TONGUE-AND-GROOVE DECK SHALL BE COVERED BY ROOFING MATERIALS BY OTHERS AS NOTED ON THE DRAWING.
7. FASTENERS
   A. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325 OR A307 (SEE DETAILS).
   B. HIGH STRENGTH BOLTS SHALL BE HOT DIP GALVANIZED
   C. ALL BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION AS DEFINED IN THE 2004 RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
8. SHOP FABRICATION AND FIELD ASSEMBLY
   A. ALL STRUCTURAL STEEL COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.
   B. ALL SHOP WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS
   C. ALL SHOP WELDS SHALL BE IN STRICT ACCORDANCE WITH THE STRUCTURAL WELDING CODE AWS D1.1 OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ALL STRUCTURAL WELDS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF "PRE-QUALIFIED" WELDED JOINTS. ALL WELDING SHALL CONFORM TO AWS A5.18 ER70S-6 SERIES E70XX ELECTRODES - LOW HYDROGEN
   D. FIELD WELDING SHALL NOT BE REQUIRED

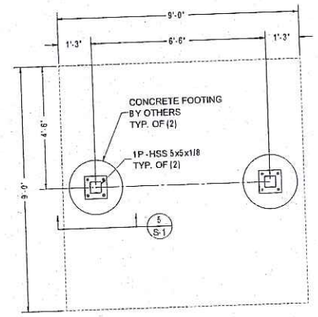
BASIS OF DESIGN

DESIGN PARAMETERS	
ROOF LIVE LOAD	20 PSF
GROUND SNOW LOAD	20 PSF
DESIGN ROOF DEAD LOAD	5 PSF
WIND CRITERIA I EXPOSURE C	90 MPH
SOIL DESIGN BEARING STRENGTH	1000 PSF
CODES	2009 IBC ASCE 7-05

BUILDING DATA	
OCCUPANCY CLASSIFICATION	A-3 (NONSEPARATE USE)
CONSTRUCTION TYPE	TYPE II-B
FLOOR AREA	81 SQ. FT
OCCUPANCY LOAD	7 SQ. FT. / OCCUPANT = 11 OCCUPANTS / SHELTER

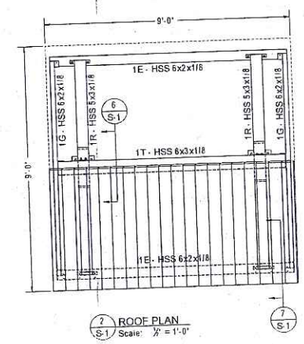
DESIGN CRITERIA

WIND DESIGN CRITERIA	
BASIC WIND SPEED	90 MPH
WIND IMPORTANCE FACTOR	$I_w = 1.0$
OCCUPANCY CATEGORY	II
WIND EXPOSURE	C
INTERNAL PRESSURE COEFFICIENT	N/A (OPEN STRUCTURE)
DESIGN WIND PRESSURE (COMPONENTS & CLADDING)	SEE CALCS
SEISMIC DESIGN CRITERIA	
SEISMIC IMPORTANCE FACTOR	$I_e = 1.0$
OCCUPANCY CATEGORY	II
SPECTRAL RESPONSE ACCELERATION 0.2 SECOND	$S_s = 0.585$
SPECTRAL RESPONSE ACCELERATION 1.0 SECOND	$S_1 = 0.155$
SITE CLASS	D (ASSUMED)
SPECTRAL RESPONSE COEFFICIENT, S_{DS}	0.470
SPECTRAL RESPONSE COEFFICIENT, S_{D1}	0.225
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC FORCE RESISTING SYSTEM	ORDINARY STEEL MOMENT FRAME
DESIGN BASE SHEAR	$V = C_s W$
RESPONSE MODIFICATION FACTOR	$R = 1.25$
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE



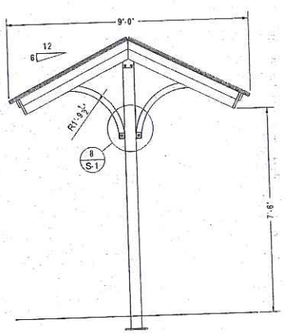
1 S-1 FOUNDATION PLAN
Scale: 1/4" = 1'-0"

NOTE: T&G WOOD SUB-ROOF (BY AMERICANA) SHALL BE COVERED BY ASPHALT SATURATED FELT AND CORRUGATED METAL ROOF BY OTHERS. RECOMMENDED ATTACHMENT FASTENTER: #10 x 1" LAG SCREW.

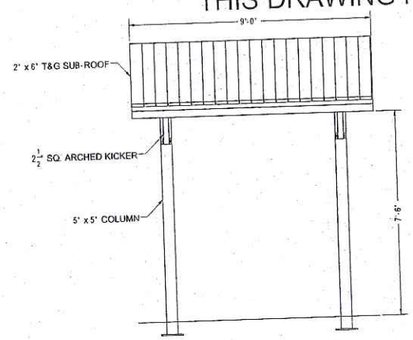


2 S-1 ROOF PLAN
Scale: 1/4" = 1'-0"

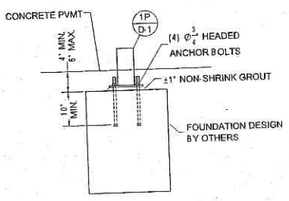
NOT FOR CONSTRUCTION
THIS DRAWING FOR ESTIMATING PURPOSES ONLY



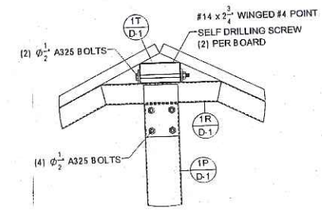
3 S-1 END ELEVATION
Scale: 1/2" = 1'-0"



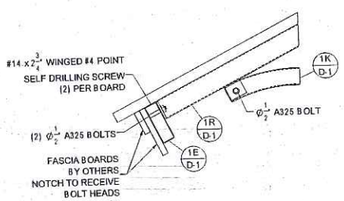
4 S-1 SIDE ELEVATION
Scale: 1/2" = 1'-0"



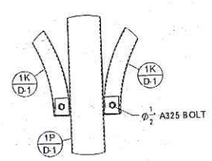
5 S-1 FOUNDATION SECTION
Scale: 1/4" = 1'-0"



6 S-1 RAFTER TO POST CONNECTION
Scale: 1 1/2" = 1'-0"



7 S-1 EDGE BEAM TO RAFTER CONNECTION
Scale: 1 1/2" = 1'-0"



8 S-1 KICKER TO POST CONNECTION
Scale: 1 1/2" = 1'-0"

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NOT INTENDED FOR CONSTRUCTION USE

TITLE
9'-0" x 9'-0"
CHEROKEE SHELTER
WILDWOOD, MO 63038

DRAWN BY	AY
CHECKED BY	
SCALE	SEE DETAILS
DATE	12/21/2015
REVISE DATE	12/8/2015
P.O. NO.	
JOB NO.	
DRAWING NO.	
SHEET	S-1
	OF 1 SHEETS

terraspec
LAND PLANNING
RECREATION PLANNING AND DESIGN
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Al Foster
Trailhead Park
Grand Ave & 3rd St.
Wildwood, Missouri

OWNER
City of Wildwood
16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

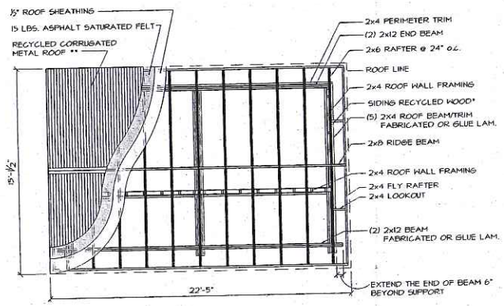
SHEET TITLE
9x9 Mini Shelter

JOB NUMBER
10015

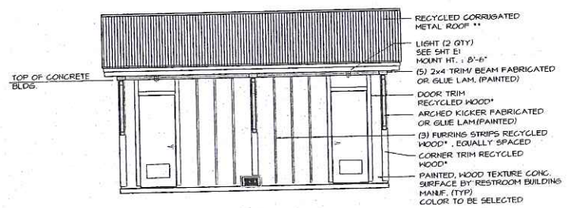
DATE 02/08/16 DRAWN BY DWD

REVISION
- -

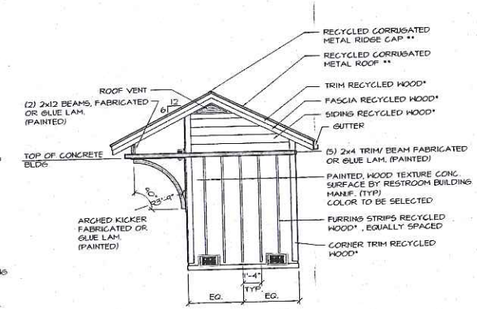
SHEET NUMBER
D3B



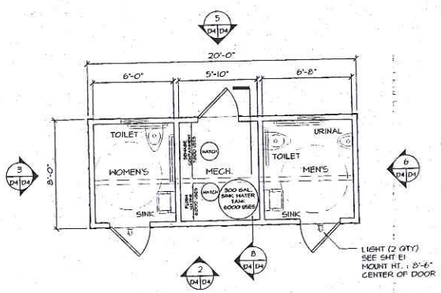
Roof Plan 1 D4 D4
SCALE: 1/4" = 1'-0"



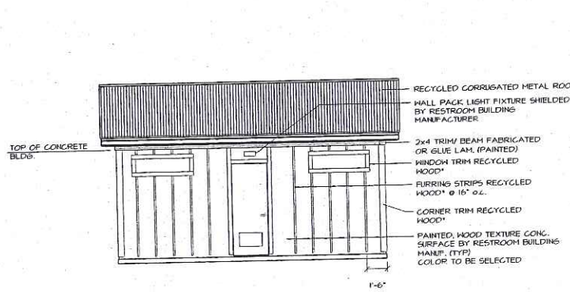
Front Elevation 2 D4 D4
SCALE: 1/4" = 1'-0"



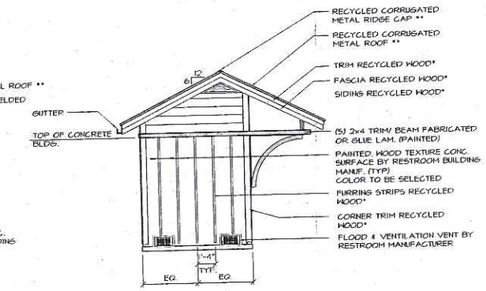
Right Elevation 3 D4 D4
SCALE: 1/4" = 1'-0"



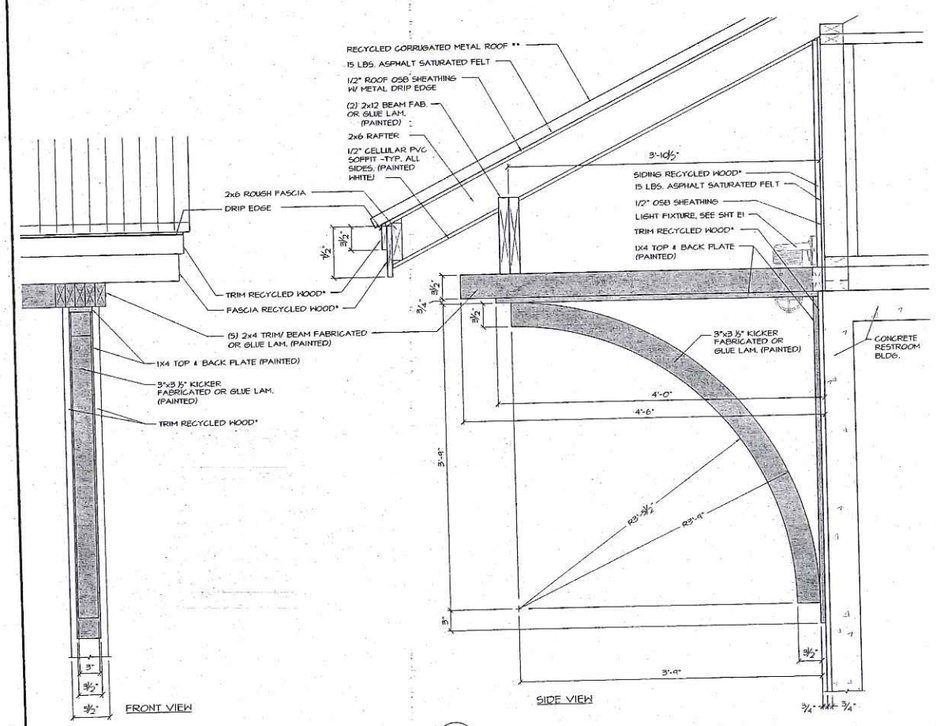
Floor Plan 4 C2 D4
SCALE: 1/4" = 1'-0"



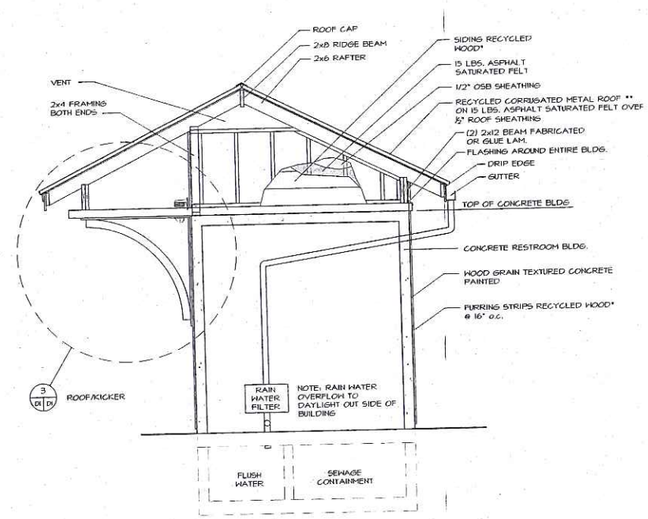
Rear Elevation 5 D4 D4
SCALE: 1/4" = 1'-0"



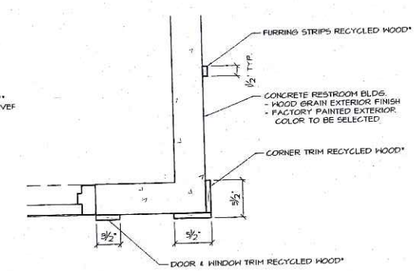
Left Elevation 6 D4 D4
SCALE: 1/4" = 1'-0"



Roof /Kicker 7 D4 D4
SCALE: 1-1/2" = 1'-0"



Section 8 D4 D4
SCALE: 1/2" = 1'-0"



Trim/Furring Detail 9 D4 D4
SCALE: 1-1/2" = 1'-0"

GENERAL NOTES:

* OWNER SUPPLIED, CONTRACTOR INSTALLED, 1x8 WEATHERED, OAK BOARDS, VARIOUS LENGTHS TO BE UTILIZED FOR SIDING, TRIM AND FASCIA ON PRE-MANUFACTURED RESTROOM BLDG. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

** OWNER SUPPLIED 2'x10' WEATHERED, CORRUGATED METAL PANELS TO BE UTILIZED FOR ROOFING ON RESTROOM BLDG.. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR RIPPING MATERIAL TO SIZES INDICATED.

RESTROOM BUILDING CONSIST OF A PRE-MANUFACTURED, CONCRETE STRUCTURE WITH A FLAT CONCRETE ROOF COMPLETE WITH ALL INTERIOR LIGHTS AND FIXTURES, SURFACE FINISHES, PLUMBING, WIRING, ETC. EXTERIOR WALLS ARE PRE FINISHED. INSTALLATION CONTRACTOR IS RESPONSIBLE FOR ROOF CONSTRUCTION AND ALL EXTERIOR FINISH WORK EXCEPT PRE PAINTED EXTERIOR SURFACE OF CONCRETE BUILDING. (SEE SPECS BELOW)

SPECIFICATIONS FOR PRECAST RESTROOM BUILDING (CUSTOMIZED DURANGO MODEL) AS DISTRIBUTED BY GREEN FLUSH TECHNOLOGIES OR APPROVED EQUAL

- PRECAST CONCRETE RESTROOM BUILDING WITH OUTSIDE DIMENSIONS EQUAL TO 8'-0"W X 20'-0"L X 9'0"H SET OVER A CONCRETE VAULT WITH OUTSIDE DIMENSIONS EQUAL TO 8'-0"W X 20'-0"L X 3'0"H.
- CONCRETE FLOORS FOR CABIN AND VAULT SHALL BE MINIMUM 6" THICK. CONCRETE CEILING/ROOF SHALL BE FLAT WITH NO SLOPE.
- CONCRETE CABIN WALLS SHALL BE 4" THICK. CONCRETE VAULT WALLS SHALL BE 4" THICK MINIMUM.
- INTERIOR CABIN WALLS SHALL BE SMOOTH, PAINTED CONCRETE (WHITE).
- EXTERIOR CABIN WALLS SHALL HAVE SIMULATED WOOD, PAINTED FINISH (COLOR TO BE SELECTED).
- CONCRETE FLOORS SHALL HAVE A LIGHT BROOM FINISH (NATURAL COLOR, SEALED).
- FIBERGLASS 3'-0" X 7'-0" DOORS WITH VANDAL RESISTANT VENTILATION GRILLS - APPROX. 1"X2", AND FRAMES (COLOR TO BE SELECTED).
- TRANSFER GRILLS IN WALLS BETWEEN CABINS AND MECHANICAL ROOM;
- FAN IN CEILING OF MECHANICAL ROOM EQUIPPED WITH MOTION SENSORS IN BOTH CABINS AND AUTOMATIC TIMER WITH MANUAL OVERRIDE.
- HEAVY DUTY DOOR HARDWARE.
- FROSTED POLYCARBONATE WINDOWS (1'-0"X4'-0") WITH METAL FRAMES.
- PLUMBING: VITREOUS CHINA PLUMBING FIXTURES INCLUDING SINKS, URINAL, AND 1-2 QT. FLUSH TOILETS;
- METERING FAUCETS;
- TAMPER PROOF HOSE BIBS (2);
- FLOOR DRAINS (2);
- RAINWATER CATCHMENT SYSTEM WITH 100 MICRON FILTER WITH FULL LENGTH GUTTER ON BACK FASCIA;
- ONE POLYETHYLENE 300 GALLON POTABLE WATER STORAGE TANK IN MECHANICAL ROOM; AND ALL NECESSARY PIPING.
- ELECTRICAL: 120V AC ELECTRICAL SERVICE AND PANEL; MOTION AND PHOTO-CELL CONTROLLED INTERIOR AND EXTERIOR LIGHTS.
- AUTOMATIC MAGNETIC DOOR LOCKS
- SENSOR AND WARNING STROBE LIGHT FOR WHEN SEWAGE TANK APPROACHES FULL CAPACITY; ALL NECESSARY WIRING.
- ACCESSORIES: DOOR CLOSERS; GRAB BARS; TOILET PAPER HOLDERS; SOAP DISPENSERS; AND MIRRORS.
- FLOOD AND VENTILATION VENTS.

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Wildwood, Missouri

OWNER

City of Wildwood

16860 Main Street
Wildwood, MO
63040
Ph: 636-458-0440
Fax: (636) 458-6969

SHEET TITLE

Restroom Details

JOB NUMBER

10015

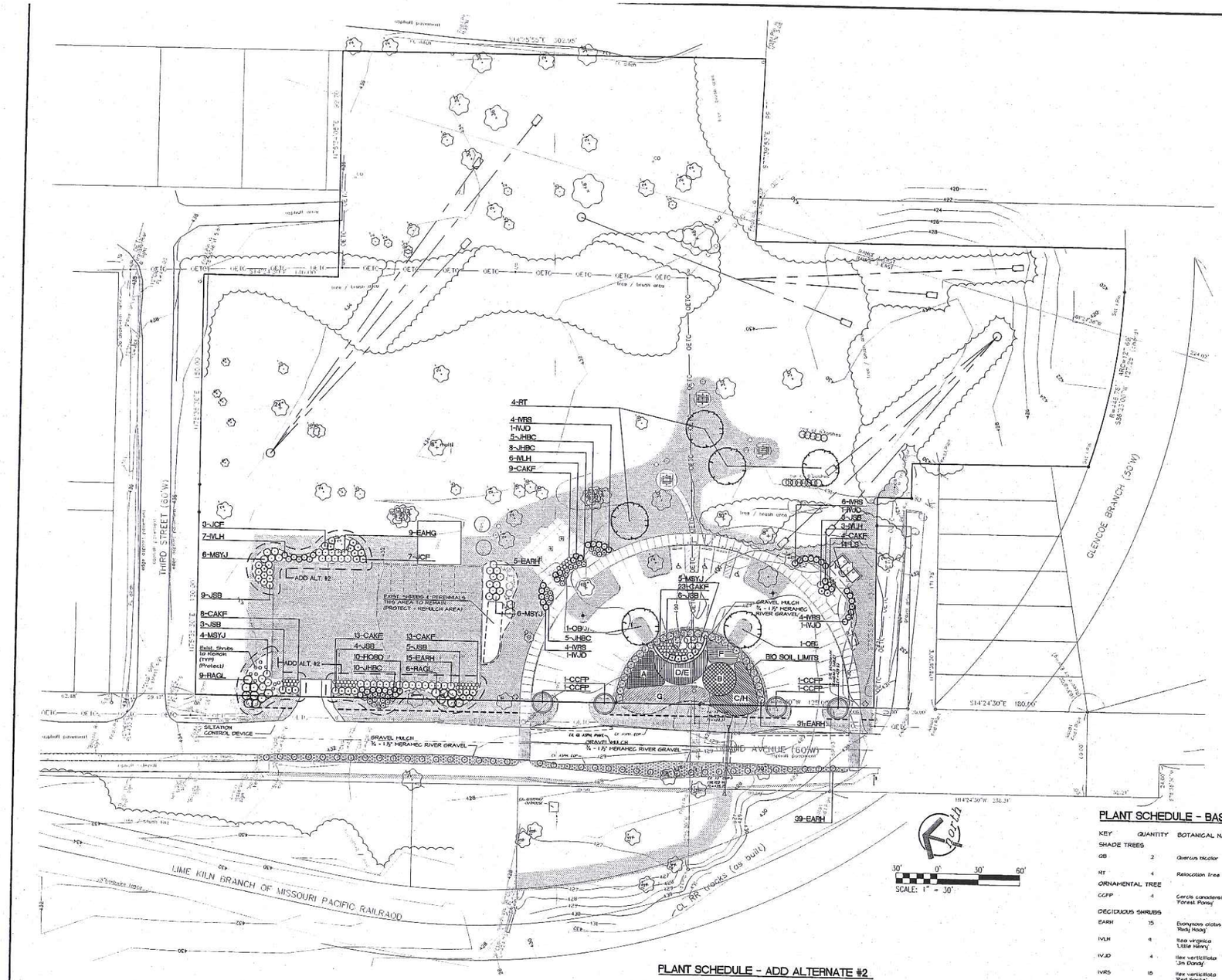
DATE 02/08/16 DRAWN BY DWD

REVISION

- -

SHEET NUMBER

D4



GENERAL NOTES

1. REPORT ANY DISCREPANCIES FOUND WITH REGARD TO EXISTING AND/OR PROPOSED CONDITIONS IMMEDIATELY TO THE CITY'S REPRESENTATIVE.

2. DO NOT PROCEED WITH CONSTRUCTION ACTIVITIES WHERE KNOWN DISCREPANCIES EXIST. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR NECESSARY REVISIONS RESULTING FROM FAILURE TO PROVIDE PROPER NOTIFICATION.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH OTHER RELATED CONSTRUCTION ACTIVITIES NECESSARY TO ACCOMPLISH SPECIFIED WORK.

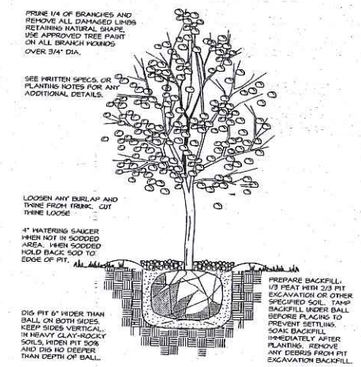
4. SEE PLANTING DETAILS AND NOTES FOR ADDITIONAL INFORMATION.

5. ALL SHRUB BEDS SHALL RECEIVE 3"-4" GRIEDDED HARDWOOD BARK MULCH. APPLY GRANULAR PRE-EMMERGENT HERBICIDE THROUGHOUT PLANT BED. APPLY PER MANUFACTURER'S RECOMMENDED RATE.

6. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION, THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE. OTHERS MAY EXIST THAT ARE PRESENTLY UNKNOWN. CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL UTILITIES FIELD LOCATED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL NECESSARY CONSTRUCTION PERMITS FROM APPROPRIATE AGENCIES PRIOR TO BEGINNING WORK.

8. IN THE EVENT THAT PLAN GRAPHICS AND PLANT SCHEDULE CONFLICT, PLAN GRAPHICS SHALL TAKE PRECEDENCE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES.



DECIDUOUS TREE PLANTING
NOT TO SCALE

SHRUB PLANTING
NOT TO SCALE

PLANT SCHEDULE - BASE BID

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE & PLANTING METHOD		REMARKS
SHADE TREES						
QB	2	Quercus bicolor	SWAMP WHITE OAK	3-3 1/2" CAL.	B & B	
RT	4	Relocation Tree (Red Maple)		3-4" CAL.	B & B	
ORNAMENTAL TREE						
CCFP	4	Cercis canadensis 'Forest Pansy'	FOREST PANSY REDBUD	2-2 1/2" CAL	B & B	SPECIMENS, SINGLE TRUNK, 4' TRUNK HEIGHT
DECIDUOUS SHRUBS						
EARH	15	Euonymus alatus 'Rudy Haag'	RUDY HAAG BURNING BUSH	5 GAL.	CONT.	
IVLH	9	Ilex virginica 'Little Henry'	LITTLE HENRY VIRGINIA SWEETSPIRE	5 GAL.	CONT.	
IVJD	4	Ilex verticillata 'Jim Dandy'	JIM DANDY WINTERBERRY	5 GAL.	CONT.	
IVRS	15	Ilex verticillata 'Red Sprite'	RED SPRITE WINTERBERRY	5 GAL.	CONT.	
EVERGREEN SHRUBS						
JHBC	16	Juniperus horizontalis 'Blue Chip'	BLUE CHIP JUNIPER	5 GAL.	CONT.	
JSB	9	Juniperus sabina 'Buffalo'	BUFFALO JUNIPER	5 GAL.	CONT.	
GROUNDCOVER/ANNUALS/ PERENNIALS/GRASSES						
CAKF	36	Calamagrostis x acutiflora 'Karl Foerster'	FEATHER REED GRASS 'KARL FOERSTER'	3 GAL.	CONT.	
LS	14	Liriope spicata	LILY TURF	1 QT.	CONT.	12" o.c.
MSYJ	11	Miscanthus sinensis 'Yaku Jima'	MAIDENHAIR GRASS	5 GAL.	CONT.	

PLANT SCHEDULE - ADD ALTERNATE #2

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE & PLANTING METHOD		REMARKS
DECIDUOUS SHRUBS						
EARH	24	Euonymus alatus 'Rudy Haag'	RUDY HAAG BURNING BUSH	5 GAL.	CONT.	
HQSO	10	Hydrangea quercifolia 'Sike's Dwarf'	SIKES DWARF OAKLEAF HYDRANGEA	5 GAL.	CONT.	
IVLH	7	Ilex virginica 'Little Henry'	LITTLE HENRY VIRGINIA SWEETSPIRE	5 GAL.	CONT.	
RAGL	15	Rhus aromatica 'Gro-Low'	GRO-LOW FRAGRANT SUMAC	5 GAL.	CONT.	
EVERGREEN SHRUBS						
JHBC	10	Juniperus horizontalis 'Blue Chip'	BLUE CHIP JUNIPER	5 GAL.	CONT.	
JSB	21	Juniperus sabina 'Buffalo'	BUFFALO JUNIPER	5 GAL.	CONT.	
JCF	10	Juniperus chinensis 'Fruitlandii'	FRUITLAND COMPACT JUNIPER	5 GAL.	CONT.	
GROUNDCOVER/ANNUALS/ PERENNIALS/GRASSES						
CAKF	34	Calamagrostis x acutiflora 'Karl Foerster'	FEATHER REED GRASS 'KARL FOERSTER'	3 GAL.	CONT.	
MSYJ	10	Miscanthus sinensis 'Yaku Jima'	MAIDENHAIR GRASS	5 GAL.	CONT.	

NOTE: ALL SOIL PREP., MULCHING & SEEDING IN THIS AREA IS PART OF ALTERNATE #2.

PLANT SCHEDULE (WATER QUALITY BASIN) - BASE BID

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE & PLANTING METHOD	REMARKS
A	105	Carex muskingumensis	PALM SEDGE	TYPE 38 DCP	24" o.c.
B	100	Chelone obliqua	ROSE TURTLEHEAD	TYPE 38 DCP	24" o.c.
C	88	Amsonia tiburtris	SPRING BLUESTAR	TYPE 38 DCP	24" o.c. RANDOM PLACEMENT
D	66	Eupatorium coelestinum	MIST FLOWER	TYPE 38 DCP	24" o.c. RANDOM PLACEMENT
E	66	Heuchera richardsonii	PRAIRIE ALUMROOT	TYPE 38 DCP	24" o.c. RANDOM PLACEMENT
F	63	Hibiscus lasiocarpos	ROSE MALLOW	TYPE 38 DCP	24" o.c.
G	215	Pycnanthemum tenuifolium	SLENDER MOUNTAIN MINT	TYPE 38 DCP	24" o.c.
H	88	Juncus effusus	SOFT RUSH	TYPE 38 DCP	24" o.c. RANDOM PLACEMENT

BIO RETENTION SOIL SPECIFICATIONS

PLANTING SOIL SHALL BE SANDY LOAM OR LOAMY SAND (SHOULD CONTAIN A MINIMUM OF 60 PERCENT SAND BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 10 PERCENT BY VOLUME. A SATURATED HYDRAULIC CONDUCTIVITY OF AT LEAST 10 FEET PER DAY (0.5 INCHES PER HOUR) IS REQUIRED. THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1 INCH IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS, SUCH AS JOHNSON GRASS, MUGWORT AND CANADIAN THISTLE SHALL NOT BE PRESENT IN THE SOILS. PLACEMENT OF THE PLANTING SOIL SHALL BE IN LIFTS OF 12 TO 18 INCHES TO 30" FINAL DEPTH LOOSELY COMPACTED (RUBBER WHEELED HEAVY EQUIPMENT AND MECHANICAL TAMPING DEVICES ARE NOT RECOMMENDED FOR COMPACTION).

SPECIFIC PLANTING SOIL CHARACTERISTICS	
PARAMETER	VALUE
PH RANGE	5.2 TO 8.00
ORGANIC MATTER	1.5 TO 5.0%
MAGNESIUM	35 LBS. PER ACRE, MINIMUM
PHOSPHORUS	15 LBS. PER ACRE, MINIMUM
POTASSIUM	85 LBS. PER ACRE, MINIMUM
SOLUBLE SALTS	≤ 500 PPM

BIO RETENTION MULCH SPECIFICATIONS

MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE DOUBLE SHREDDED HARDWOOD MULCH. MULCH LAYER SHOULD BE FREE OF OTHER MATERIALS SUCH AS WEED, SOIL, ROOTS, ETC. MULCH DEPTH, 2-3"

NOTE: Underground facilities, structures, and utilities have been plotted from best available records, therefore the relationship between proposed work and existing facilities, structures, and utilities must be considered approximate, and it is the contractors responsibility to determine their exact location and the existence of any not shown.

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SHEET TITLE

Landscape Plan

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

REVISION

- -

SHEET NUMBER

L1

PART 1 - GENERAL

SUMMARY

THIS SECTION INCLUDES PROVISIONS FOR THE FOLLOWING ITEMS:
TREES.
SHRUBS.
GROUND COVER.
LAWN REPAIRATIONS.
SOIL AMENDMENTS.
INITIAL MAINTENANCE OF LANDSCAPE MATERIALS.

QUALITY ASSURANCE

SUBCONTRACT LANDSCAPE WORK TO A SINGLE FIRM SPECIALIZING IN LANDSCAPE WORK.

SOURCE QUALITY CONTROL

GENERAL: SWP LANDSCAPE MATERIALS WITH CERTIFICATES OF INSPECTION REQUIRED BY GOVERNING AUTHORITIES. COMPLY WITH REGULATIONS APPLICABLE TO LANDSCAPE MATERIALS.

DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY TO LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL.

ANALYSIS AND STANDARDS: PACKAGE STANDARD PRODUCTS WITH MANUFACTURER'S CERTIFIED ANALYSIS. FOR OTHER MATERIALS, PROVIDE ANALYSIS BY RECOGNIZED LABORATORY MADE IN ACCORDANCE WITH METHODS ESTABLISHED BY THE ASSOCIATION OF OFFICIAL AGRICULTURE CHEMISTS, WHEREVER APPLICABLE.

TREES, SHRUBS AND PLANTS: PROVIDE TREES, SHRUBS, AND PLANTS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". PROVIDE HEALTHY, VIGOROUS STOCK GROWN IN RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT.

LABEL AT LEAST ONE TREE AND ONE SHRUB OF EACH VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.

WHERE FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF TREES OR SHRUBS ARE SHOWN, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND LABEL WITH NUMBER TO ASSURE SYMMETRY IN PLANTING.

INSPECTION: THE LANDSCAPE ARCHITECT MAY INSPECT TREES AND SHRUBS EITHER AT PLACE OF GROWTH OR AT SITE BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. ARCHITECT RETAINS RIGHT TO FURTHER INSPECT TREES AND SHRUBS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEMS, INSECTS, INJURIES AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. REMOVE REJECTED TREES OR SHRUBS IMMEDIATELY FROM PROJECT SITE.

SUBMITTALS

PLANT AND MATERIAL CERTIFICATIONS:

CERTIFICATES OF INSPECTION AS REQUIRED BY GOVERNMENTAL AUTHORITIES.

MANUFACTURER'S OR VENDOR'S CERTIFIED ANALYSIS FOR SOIL AMENDMENTS AND FERTILIZER MATERIALS.

LABEL DATA SUBSTANTIATING THAT PLANTS, TREES, SHRUBS AND PLANTING MATERIALS COMPLY WITH SPECIFIED REQUIREMENTS.

SEED VENDOR'S CERTIFIED STATEMENT FOR EACH GRASS SEED MIXTURE REQUIRED, STATING BOTANICAL AND COMMON NAME, PERCENTAGES BY WEIGHT, AND PERCENTAGES OF PURITY, GERMINATION, AND WEED SEED FOR EACH GRASS SEED SPECIES.

DELIVERY STORAGE AND HANDLING

PACKAGED MATERIALS: DELIVER PACKAGED MATERIALS IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.

SOD: TIME DELIVERY SO THAT SOD WILL BE PLACED WITHIN 24 HOURS AFTER STRIPPING. PROTECT SOD AGAINST DRYING AND BREAKING OF ROLLED STRIPS.

TREES AND SHRUBS: PROVIDE FRESHLY DUG TREES AND SHRUBS. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING DELIVERY. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY.

DELIVER TREES AND SHRUBS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS UNTIL PLANTING TIME.

JOB CONDITIONS

UTILITIES: DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS INITIALLY AGREED UPON BY PARTIES CONCERNED.

EXCAVATION: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY LANDSCAPE ARCHITECT BEFORE PLANTING.

SEQUENCING AND SCHEDULING

PLANTING TIME: PROCEED WITH AND COMPLETE LANDSCAPE WORK AS RAPIDLY AS PORTIONS OF SITE BECOME AVAILABLE, WORKING WITHIN SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.

PLANT OR INSTALL MATERIALS DURING NORMAL PLANTING SEASONS FOR EACH TYPE OF PLANT MATERIAL REQUIRED.

SPECIAL PROJECT WARRANTY

WARRANTY TREES AND SHRUBS FOR A PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION, AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND LANDSCAPE INSTALLER'S CONTROL.

REMOVE AND REPLACE TREES, SHRUBS, OR OTHER PLANTS FOUND TO BE DEAD OR IN UNHEALTHY CONDITION DURING WARRANTY PERIOD. MAKE REPLACEMENTS DURING GROWTH SEASON FOLLOWING END OF WARRANTY PERIOD. REPLACE TREES AND SHRUBS WHICH ARE IN DOUBTFUL CONDITION AT END OF WARRANTY PERIOD, UNLESS, IN OPINION OF LANDSCAPE ARCHITECT, IT IS ADVISABLE TO EXTEND WARRANTY PERIOD FOR A FULL GROWING SEASON.

ANOTHER WARRANTY INSPECTION WILL BE CONDUCTED AT END OF EXTENDED WARRANTY PERIOD, IF ANY, TO DETERMINE ACCEPTANCE OR REJECTION. ONLY ONE REPLACEMENT (PER TREE, SHRUB OR PLANT) WILL BE REQUIRED AT END OF WARRANTY PERIOD, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH SPECIFIED REQUIREMENTS.

PART 2 - PRODUCTS TOPSOIL

PROVIDE NEW TOPSOIL THAT IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 2 INCHES IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.

OBTAIN TOPSOIL FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT PROJECT SITE. OBTAIN TOPSOIL ONLY FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS IN A DEPTH OF NOT LESS THAN 4 INCHES. DO NOT OBTAIN FROM BOGS OR MARSHES.

SOIL AMENDMENTS

PEAT HUMUS: FINELY DIVIDED PEAT, SO COMPLETELY DECOMPOSED AND FREE OF FIBERS THAT ARTS BIOLOGICAL IDENTITY IS LOST. PROVIDE IN GRANULAR FORM, FREE OF HARD LUMPS AND WITH A RANGE SUITABLE FOR INTENDED USE.

MANURE: WELL ROTTED, UNLEACHED STABLE OR CATTLE MANURE CONTAINING NOT MORE THAN 25 PERCENT BY VOLUME OF STRAW, SAWDUST, OR OTHER BEDDING MATERIALS AND CONTAINING NO CHEMICALS OR INGREDIENTS HARMFUL TO PLANTS.

MULCH: ORGANIC MULCH FREE FROM DELETERIOUS MATERIALS AND SUITABLE FOR TOP DRESSING OF TREES, SHRUBS, OR PLANTS AND CONSISTING OF SHREDDED HARDWOOD.

COMMERCIAL FERTILIZER: COMPLETE FERTILIZER OF NEUTRAL CHARACTER, WITH SOME ELEMENTS DERIVED FROM ORGANIC SOURCES AND CONTAINING FOLLOWING PERCENTAGES OF AVAILABLE PLANT NUTRIENTS:

FOR TREES AND SHRUBS, PROVIDE FERTILIZER WITH NOT LESS THAN 20 PERCENT (20%) TOTAL NITROGEN, 10 PERCENT (10%) AVAILABLE PHOSPHORIC ACID AND 5 PERCENT (5%) SOLUBLE POTASH. THIS FERTILIZER SHALL BE PROVIDED IN SLOW RELEASE TABLET FORM.

FOR SODDED LAWNS, AFTER INSTALLATION OF SOD, PROVIDE FERTILIZER WITH NOT LESS THAN TEN PERCENT (10%) AVAILABLE NITROGEN AND NOT LESS THAN SIX PERCENT (6%) PHOSPHORIC ACID AND NOT LESS THAN FOUR PERCENT (4%) POTASH. IRRIGATE AFTER APPLICATION.

FOR SOIL PREPARATION OF ALL LAWN AREAS, PROVIDE STARTER FERTILIZER (6-24-6).

PLANT MATERIALS

QUALITY: PROVIDE TREES, SHRUBS, AND OTHER PLANTS OF SIZE, GENUS, SPECIES, AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK".

DECIDUOUS TREES: PROVIDE TREES OF HEIGHT AND CALIPER SCHEDULED OR SHOWN AND WITH BRANCHING CONFIGURATION RECOMMENDED BY ANSI Z60.1 FOR TYPE AND SPECIES REQUIRED. PROVIDE SINGLE STEM TREES EXCEPT WHERE SPECIAL FORMS ARE SHOWN OR LISTED.

PROVIDE BALLED AND BURLAPPED (B&B) DECIDUOUS TREES.

CONTAINER GROWN DECIDUOUS TREES WILL BE ACCEPTABLE IN LIEU OF BALLED AND BURLAPPED DECIDUOUS TREES SUBJECT TO SPECIFIED LIMITATIONS OF ANSI Z60.1 FOR CONTAINER STOCK.

DECIDUOUS SHRUBS: PROVIDE SHRUBS OF THE HEIGHT SHOWN OR LISTED AND WITH NOT LESS THAN MINIMUM NUMBER OF CANES REQUIRED BY ANSI Z60.1 FOR TYPE AND HEIGHT OF SHRUB REQUIRED.

PROVIDE BALLED AND BURLAPPED (B&B) DECIDUOUS SHRUBS. CONTAINER GROWN DECIDUOUS SHRUBS WILL BE ACCEPTABLE IN LIEU OF BALLED AND BURLAPPED DECIDUOUS SHRUBS SUBJECT TO SPECIFIED LIMITATIONS FOR CONTAINER GROWN STOCK.

CONIFEROUS AND BROADLEAFED EVERGREENS: PROVIDE EVERGREENS OF SIZES SHOWN OR LISTED. DIMENSIONS INDICATE MINIMUM SPREAD FOR SPREADING AND SEMI-SPREADING TYPE EVERGREENS AND HEIGHT FOR OTHER TYPES, SUCH AS GLOBE, DWARF, CONE, PYRAMIDAL, BROAD UPRIGHT, AND COLUMNAR. PROVIDE NORMAL QUALITY EVERGREENS WITH WELL BALANCED FORM COMPLYING WITH REQUIREMENTS FOR OTHER SIZE RELATIONSHIPS TO THE PRIMARY DIMENSION SHOWN.

PROVIDE BALLED AND BURLAPPED (B&B) EVERGREENS.

CONTAINER GROWN EVERGREENS WILL BE ACCEPTABLE, SUBJECT TO SPECIFIED LIMITATIONS FOR CONTAINER GROWN STOCK.

PLANT MIX BACKFILL

PLANT MIX SHALL BE USED TO BACKFILL AROUND ALL TREE/SHRUB PLANTINGS AND IN ALL PLANTERS, AS INDICATED ON THE DRAWINGS.

GRASS MATERIALS

GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSTS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PROPORTIONS AS INDICATED BELOW, SEED SHALL NOT EXCEED ONE (1) PERCENT WEED CONTACT.

20-30% ANNUAL RYEGRASS
10-80% K-31 TALL FESCUE
OR SIMILAR "CONTRACTOR'S" SEED MIX

GROUND COVER

PROVIDE PLANTS ESTABLISHED AND WELL ROOTED IN REMOVABLE CONTAINERS OR INTEGRAL PEAT POTS AND WITH NOT LESS THAN MINIMUM NUMBER AND LENGTH OF RUNNERS REQUIRED BY ANSI Z60.1 FOR THE POT SIZE SHOWN OR LISTED.

MISCELLANEOUS LANDSCAPE MATERIALS:

ANTI-EROSION MULCH: PROVIDE CLEAN, SEED-FREE SALT HAY OR THRESHED STRAW OF WHEAT, RYE, OATS, OR BARLEY.

ANTI-DESICCANT: EMULSION TYPE, FILM-FORMING AGENT DESIGNED TO PERMIT TRANSPIRATION, BUT RETARD EXCESSIVE LOSS OF MOISTURE FROM PLANTS. DELIVER IN MANUFACTURER'S FULLY IDENTIFIED CONTAINERS AND MIX IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

FILTRATION/SEPARATION FABRIC: WATER PERMEABLE FILTRATION FABRIC OF POLYPROPYLENE FABRIC OR AS NOTED ON DRAWINGS.

PART 3 - EXECUTION

INSTALLATION:

PROCEED WITH AND COMPLETE THE LANDSCAPE WORK AS RAPIDLY AS PORTIONS OF THE SITE BECOME AVAILABLE, WORKING WITHIN THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.

COOPERATE WITH ANY OTHER CONTRACTORS AND TRADES WHICH MAY BE WORKING IN ANY ADJACENT TO THE LANDSCAPE WORK AREAS. EXAMINE DRAWINGS WHICH SHOW THE DEVELOPMENT OF THE ENTIRE SITE AND BECOME FAMILIAR WITH THE SCOPE OF ALL WORK REQUIRED.

EXCAVATION FOR PLANTING:

WHERE RUBBLE FILL IS ENCOUNTERED, PREPARE PLANTING PITS PROPERLY BY REMOVAL OF RUBBLE OR OTHER ACCEPTABLE METHODS.

OBSTRUCTIONS: IF ROCK, UNDERGROUND CONSTRUCTION WORK, OR OTHER OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF TREES OR SHRUBS, NOTIFY THE LANDSCAPE ARCHITECT. ISH LOCATIONS MAY BE SELECTED BY THE LANDSCAPE ARCHITECT.

DRAINAGE: IF SUBSOIL CONDITIONS INDICATE THE RETENTION OF WATER IN PLANTING AREAS, AS SHOWN BY SEEPAGE, OR OTHER EVIDENCE INDICATING PRESENCE OF UNDERGROUND WATER, NOTIFY THE LANDSCAPE ARCHITECT BEFORE BACKFILLING.

SOIL PREPARATION

LIMIT PREPARATION TO AREAS WHICH WILL BE PLANTED IN THE IMMEDIATE FUTURE AND TO AREAS WHERE MAIN AND LATERAL IRRIGATION LINES HAVE BEEN INSTALLED.

IMMEDIATELY PRIOR TO APPLICATION OF THE REQUIRED AMENDMENTS, THE AREA SHALL BE THOROUGHLY RIPPED, DISKED, OR CULTIVATED TO A DEPTH OF SIX INCHES (6").

PREPARE SOIL FOR LAWN AS FOLLOWS: THE MANURE SHALL BE APPLIED UNIFORMLY TO ALL LAWN AREAS AT THE RATE OF THREE (3) CU. YARDS/1,000 SQ. FEET.

AFTER PLACEMENT OF MANURE TO PROPER RATES, THOROUGHLY ROTOTILL TO A DEPTH OF SIX INCHES (6") ALL AREAS TO BE SOIL PREPPED IMMEDIATELY AFTER SPREADING OF THE SOIL AMENDMENTS. DISKING OR RIPPING IN AMENDMENTS WILL NOT BE ACCEPTABLE.

FOR ALL SHRUB BED AND GROUND COVER AREAS, MIX INTO THE TOP 6" OF SOIL SIX (6) CUBIC FEET OF MANURE PER 100 SQ. FT. OF AREA. REMOVE ANY TURF, WEEDS, OR OTHER VEGETATION COMPLETELY (INCLUDING ROOTS) PRIOR TO SOIL PREPARATION.

FINE GRADING:

FINISH GRADING SHALL BE ACCOMPLISHED TO WITHIN ONE OF A FOOT OF PROPOSED ELEVATIONS ON ANY AREA OF DISTURBED OR FILL SOIL. A SMOOTH, COMPATIBLE TRANSITION SHALL BE PRODUCED BETWEEN AREAS OF UNDISTURBED SOIL AND THE AREAS BEING FINISH GRADED. DEBRIS SHALL BE REMOVED AFTER FINAL PASS.

BLADING, DRAGGING, AND SOIL CULTIVATION TECHNIQUES SHALL BE USED TO PRODUCE A SOIL CONDITION ACCEPTABLE FOR SODDING, SEEDING, GROUND COVER BEDS, SHRUB AREAS, OR MULCHED AREAS AS SHOWN ON THE PLANS. IN SODDING AREAS, THE FINISH GRADE SHALL BE HELD TWO INCHES (2") BELOW EXISTING OR PROPOSED LEVELS OF SIDEWALKS, CURBS, SPRINKLER HEADS ETC. SEEDED AREAS SHALL BE HELD ONE INCH (1") BELOW SUCH ELEMENTS, AND MULCHED AREAS SHALL BE HELD ONE INCH (1") GREATER THAN SPECIFIED DEPTH OF THE MULCH.

DRAINAGE SWALES, DRAIN PIPES, OR OTHER OPEN SWEET DRAINAGE AREAS REQUIRING PARTICULARLY ACCURATE GRADES SHALL BE STAKED BY USE OF AN INSTRUMENT BEFORE CONSTRUCTION TO INSURE PROPER DRAINAGE. GRASSED SWALES SHALL BE CONTAINED BETWEEN 1-1/2 AND 4% GRADES UNLESS OTHERWISE SPECIFIED. DRAINAGE WAYS SHALL NOT CONTAIN ANY WATER HOLDING DEPRESSIONS.

MOUNDS, TERRACES OR OTHER EARTH FORMS SHALL BE CONSTRUCTED TO PLANS AND/OR INSTRUCTIONS OF LANDSCAPE ARCHITECT AND SHALL BE INSPECTED AND APPROVED PRIOR TO FINISH LANDSCAPE TREATMENT. CONTRACTOR SHALL USE APPROPRIATE GRADING EQUIPMENT TO INSURE DETAIL MODULATION OF EARTHFORMS AS SHOWN ON PLANS OR DIRECTED BY LANDSCAPE ARCHITECT.

THE CONTRACTOR SHALL PREPARE THE SITE IN AN ORDERLY CONDITION FREE OF ALL DEBRIS SO THAT SEEDING, SODDING, PLANTING, AND OTHER CONSTRUCTION OPERATIONS MAY PROCEED IMMEDIATELY. ALL AREAS OUTSIDE THE CONTRACT LIMITS WHICH HAVE BEEN DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL CONDITION IN ACCORDANCE WITH PROCEDURES AS DESCRIBED HEREIN AT CONTRACTOR'S EXPENSE.

MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF SOIL IS VERY DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY OFF BEFORE PLANTING OF LAWNS. DO NOT CREATE A MUDDY SOIL CONDITION OR CAUSE SURFACE EROSION.

RESTORE PREPARED AREAS TO SPECIFIED CONDITION IF ERODED OR OTHERWISE DISTURBED AFTER FINE GRADING AND PRIOR TO PLANTING.

AFTER FINE GRADING, APPLY STARTER FERTILIZER (18-24-6) AT A RATE OF FOUR POUNDS (4 LBS.) PER THOUSAND SQ. FEET (1000 SQ. FT.) UNIFORMLY ACROSS THE LANDSCAPE AREAS.

EXCAVATION FOR TREES AND SHRUBS

EXCAVATE PITS, BEDS AND TRENCHES WITH VERTICAL SIDES AND WITH BOTTOM OF EXCAVATION SLIGHTLY RAISED AT CENTER TO PROVIDE PROPER DRAINAGE. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION.

FOR BALLED AND BURLAPPED (B&B) TREES AND SHRUBS, MAKE EXCAVATIONS AT LEAST HALF AGAIN AS WIDE AS THE BALL DIAMETER AND EQUAL TO THE BALL DEPTH, PLUS FOLLOWING ALLOWANCE FOR SETTING OF BALL ON A LAYER OF COMPACTED BACKFILL.

ALLOW FOR 3 INCH THICK SETTING LAYER OF PLANTING SOIL MIXTURE.

FOR CONTAINER GROWN STOCK, EXCAVATE AS SPECIFIED FOR BALLED AND BURLAPPED STOCK, ADJUSTED TO SIZE OF CONTAINER WIDTH AND DEPTH.

FILL EXCAVATIONS FOR TREES AND SHRUBS WITH WATER AND ALLOW WATER TO PERCOLATE OUT PRIOR TO PLANTING.

PLANTING TREES AND SHRUBS

SET BALLED AND BURLAPPED (B&B) STOCK ON LAYER OF COMPACTED PLANTING SOIL MIXTURE, PLUMB AND IN CENTER OF PIT OR TRENCH WITH TOP OF BALL AT SAME ELEVATION AS ADJACENT FINISHED LANDSCAPE GRADES. REMOVE BURLAP FROM SIDES OF BALLS; RETAIN ON BOTTOMS. WHEN SET, PLACE ADDITIONAL BACKFILL AROUND BASE AND SIDES OF BALL, AND WORK EACH LAYER TO SETTLE BACKFILL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN EXCAVATION IS APPROXIMATELY 2/3 FULL, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE IS ABSORBED. WATER AGAIN AFTER PLACING FINAL LAYER OF BACKFILL.

SET CONTAINER GROWN STOCK, AS SPECIFIED, FOR BALLED BURLAPPED STOCK, EXCEPT CUT CANS ON 2 SIDES WITH AN APPROVED CAN CUTTER. REMOVE BOTTOMS OF WOODEN BOXES AFTER PARTIAL BACKFILLING SO AS NOT TO DAMAGE ROOT BALLS.

AT THE TIME OF PLANTING, SLOW RELEASE FERTILIZER TABLETS SHALL BE APPLIED TO EACH PLANT AT THE MANUFACTURER'S PRESCRIBED RATE. IN CASE OF MULTIPLE STEM, THE DIAMETER WILL BE CUMULATIVE MEASUREMENTS. THE TABLETS WILL BE PLACED NO MORE THAN FOUR INCHES (4"BTL) AWAY FROM PLANT ROOTS OR BALL AND ABOUT SIX INCHES (6") BELOW FINISHED GRADE.

DISH TOP OF BACKFILL TO ALLOW FOR MULCHING.

MULCH PITS, TRENCHES, AND PLANTED AREAS. PROVIDE NOT LESS THAN 4 INCHES (4") THICKNESS OF MULCH, ON TOP OF BACKFILL.

APPLY ANTI-DESICCANT, USING POWER SPRAY, TO PROVIDE AN ADEQUATE FILM OVER TRUNKS, BRANCHES, STEMS, THINS AND FOLIAGE.

IF DECIDUOUS TREES OR SHRUBS ARE MOVED WHEN IN FULL LEAF SPRAY WITH ANTI-DESICCANT AT NURSERY BEFORE MOVING AND SPRAY AGAIN 2 WEEKS AFTER PLANTING.

PRUNE, THIN OUT, AND SHAPE TREES AND SHRUBS IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE. PRUNE TREES TO RETAIN REQUIRED HEIGHT AND SPREAD, UNLESS OTHERWISE DIRECTED BY ARCHITECT. DO NOT CUT TREE LEADERS, AND REMOVE ONLY INJURED OR DEAD BRANCHES FROM FLOWERING TREES, IF ANY. PRUNE SHRUBS TO RETAIN NATURAL CHARACTER.

REMOVE AND REPLACE EXCESSIVELY PRUNED OR MISFORMED STOCK RESULTING FROM IMPROPER PRUNING.

MULCH: BEFORE MULCH IS PLACED, GRANULAR PRE-EMERGENCE WEED KILLER SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS OVER ALL MULCHED AREAS. EVEN, CORRECT APPLICATION OF PRE-EMERGENCE IS IMPERATIVE. ANY PLANTS FOUND TO BE IN UNHEALTHY CONDITION AS A RESULT OF IMPROPER APPLICATION SHALL IMMEDIATELY BE REMOVED AND REPLACED BY THE CONTRACTOR.

MULCH TREE PITS AND ENTIRE SHRUB BEDS WITH FOUR INCHES (4") OF MULCH. INSTALL SHRUB BED MULCH OVER WEED CONTROL FABRIC. MAKE SURE MULCH IS TO SPECIFIED DEPTH AT EDGES OF WALKS AND OTHER PAVED SURFACES, AND DOES NOT PROTRUDE ABOVE ADJACENT FINISHED GRADE OF SAME SURFACES.

SEEDING NEW LAWNS

DO NOT USE WET SEED OR SEED THAT IS MOLDY OR OTHERWISE DAMAGED IN TRANSIT OR STORAGE.

SOW SEED USING A SPREADER OR SEEDING MACHINE. DO NOT SEED WHEN WIND VELOCITY EXCEEDS 5 MILES PER HOUR. DISTRIBUTE SEED EVENLY OVER ENTIRE AREA BY SOWING EQUAL QUANTITY IN 2 DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.

SOW SPECIFIED SEED AT A RATE OF 10 LBS/1000 SF.

RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL. ROLL LIGHTLY AND WATER WITH A FINE SPRAY.

PROTECT SEEDED AREAS AGAINST EROSION BY SPREADING SPECIFIED LAWN MULCH AFTER COMPLETION OF SEEDING OPERATIONS. SPREAD UNIFORMLY TO FORM A CONTINUOUS BLANKET NOT LESS THAN 1-1/2 INCHES LOOSE MEASUREMENT OVER SEEDED AREAS.

STRAW MULCH SHALL BE APPLIED TO ALL SEEDED AREAS. RATE OF APPLICATION SHALL BE 1-1/2 TONS PER ACRE.

EROSION CONTROL NETTING SHALL BE INSTALLED ON ALL SLOPES GREATER THAN 4:1

PLANTING GROUND COVER

SPACE GROUND COVER PLANTS AS INDICATED OR SCHEDULED.

DIG HOLES LARGE ENOUGH TO ALLOW FOR SPREADING OF ROOTS AND BACKFILL WITH PLANTING SOIL. WORK SOIL AROUND ROOTS TO ELIMINATE AIR POCKETS AND LEAVE A SLIGHT SAUCER INDENTATION AROUND PLANTS TO HOLD WATER. WATER THOROUGHLY AFTER PLANTING. TAKING CARE NOT TO COVER CROWNS OF PLANTS WITH WET SOILS.

MULCH AREAS BETWEEN GROUND COVER PLANTS; PLACE NOT LESS THAN 3 INCHES THICK, UNLESS OTHERWISE NOTED.

MAINTENANCE

BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.

MAINTAIN TREES, SHRUBS, AND OTHER PLANTS UNTIL FINAL ACCEPTANCE, BUT IN NO CASE LESS THAN FOLLOWING PERIOD:

30 DAYS AFTER SUBSTANTIAL COMPLETION OF PLANTING.

MAINTAIN TREES, SHRUBS, AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.

CLEANUP AND PROTECTION

DURING LANDSCAPE WORK, KEEP PAVEMENTS CLEAN AND WORK AREA IN AN ORDERLY CONDITION.

PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED.

INSPECTION AND ACCEPTANCE

WHEN LANDSCAPE WORK IS COMPLETED, INCLUDING MAINTENANCE, LANDSCAPE ARCHITECT WILL, UPON REQUEST, MAKE AN INSPECTION TO DETERMINE ACCEPTABILITY.

LANDSCAPE WORK MAY BE INSPECTED FOR ACCEPTANCE IN PORTIONS AS AGREEABLE TO LANDSCAPE ARCHITECT, PROVIDED EACH PORTION OF WORK OFFERED FOR INSPECTION IS COMPLETE, INCLUDING MAINTENANCE.

WHEN INSPECTED LANDSCAPE WORK DOES NOT COMPLY WITH REQUIREMENTS, REPLACE REJECTED WORK AND CONTINUE SPECIFIED MAINTENANCE UNTIL REINSPECTED BY ARCHITECT AND FOUND TO BE ACCEPTABLE. REMOVE REJECTED PLANTS AND MATERIALS PROMPTLY FROM PROJECT SITE.

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SHEET TITLE
Landscape Plan

JOB NUMBER
10015

DATE 02/08/16 DRAWN BY DWD

REVISION
-

SHEET NUMBER
L2

I. EARTHWORK

1. PROJECT CONDITIONS

EXISTING UTILITIES: LOCATE EXISTING UNDERGROUND UTILITIES IN AREAS OF EXCAVATION WORK. IF UTILITIES ARE INDICATED TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING EARTHWORK OPERATIONS.

SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONSULT UTILITY OWNER IMMEDIATELY FOR DIRECTIONS. COOPERATE WITH OWNER AND UTILITY COMPANIES IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION. REPAIR DAMAGED UTILITIES TO SATISFACTION OF UTILITY OWNER.

PROTECTION OF PERSONS AND PROPERTY: BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK.

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.

PERFORM EXCAVATION BY HAND WITHIN DRIPLINE OF LARGE TREES TO REMAIN. PROTECT ROOT SYSTEMS FROM DAMAGE OR DRY OUT TO THE GREATEST EXTENT POSSIBLE. MAINTAIN MOIST CONDITION FOR ROOT SYSTEM AND COVER EXPOSED ROOTS WITH MOISTENED BURLAP.

2. SOIL MATERIALS

SUBBASE MATERIAL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, CRUSHED SLAG AND NATURAL OR CRUSHED SAND.

BACKFILL AND FILL MATERIALS: SATISFACTORY SOIL MATERIALS FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATTER.

3. EXCAVATION

EARTH EXCAVATION INCLUDES EXCAVATION OF PAVEMENTS AND OTHER OBSTRUCTIONS VISIBLE ON SURFACE; UNDERGROUND STRUCTURES, UTILITIES AND OTHER ITEMS INDICATED TO BE DEMOLISHED AND REMOVED; TOGETHER WITH EARTH AND OTHER MATERIALS ENCOUNTERED THAT ARE NOT CLASSIFIED AS ROCK.

4. DEWATERING

PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.

DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, WELL POINTS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS.

ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS TO CONVEY RAINWATER AND WATER REMOVED FROM EXCAVATIONS TO COLLECTING OR RUNOFF AREAS. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

5. STORAGE OF EXCAVATED MATERIALS

STOCKPILE EXCAVATED MATERIALS ACCEPTABLE FOR BACKFILL AND FILL WHERE DIRECTED. PLACE, GRADE AND SHAPE STOCKPILES FOR PROPER DRAINAGE.

LOCATE AND RETAIN SOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS. DO NOT STORE WITHIN DRIP LINE OF TREES INDICATED TO REMAIN.

6. EXCAVATION FOR STRUCTURES

CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FOOT AND EXTENDING A SUFFICIENT DISTANCE FROM FOOTINGS AND FOUNDATIONS TO PERMIT PLACING AND REMOVAL OF CONCRETE FORMWORK, INSTALLATION OF SERVICES AND OTHER CONSTRUCTION AND FOR INSPECTION.

EXCAVATIONS FOR FOOTINGS AND FOUNDATIONS: DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE JUST BEFORE CONCRETE REINFORCEMENT IS PLACED. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.

7. EXCAVATION FOR PAVEMENTS

CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS-SECTIONS, ELEVATIONS AND GRADES AS INDICATED.

8. COLD WEATHER PROTECTION

PROTECT EXCAVATION BOTTOMS AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35 DEGREES

9. BACKFILL AND FILL

GENERAL: PLACE SOIL MATERIAL IN LAYERS TO REQUIRED SUBGRADE ELEVATIONS FOR EACH AREA CLASSIFICATION LISTED BELOW.

UNDER GRASSED AREAS, USE SATISFACTORY EXCAVATED OR BORROW MATERIAL.

UNDER WALKS AND PAVEMENTS, USE SUBBASE MATERIAL, SATISFACTORY EXCAVATED OR BORROW MATERIAL OR A COMBINATION

UNDER STEPS, USE SUBBASE MATERIAL.

BACKFILL EXCAVATIONS AS PROMPTLY AS WORK PERMITS, BUT NOT UNTIL COMPLETION OF THE FOLLOWING:

ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE.

REMOVAL OF CONCRETE FORMWORK.

REMOVAL OF TRASH AND DEBRIS FROM EXCAVATION.

10. PLACEMENT AND COMPACTION

GROUND SURFACE PREPARATION. REMOVE VEGETATION, DEBRIS, OBSTRUCTIONS AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILLS. PLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE.

WHEN EXISTING GROUND SURFACE HAS A DENSITY LESS THAN THAT SPECIFIED UNDER "COMPACTION" FOR PARTICULAR AREA CLASSIFICATION, BREAK UP GROUND SURFACE, PULVERIZE, MOISTURE-CONDITION TO OPTIMUM MOISTURE CONTENT AND COMPACT TO REQUIRED DEPTH AND PERCENTAGE OF MAXIMUM DENSITY.

PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. COMPACT EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DRY DENSITY OR RELATIVE DRY DENSITY FOR EACH AREA CLASSIFICATION. DO NOT PLACE BACKFILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE.

CONTROL SOIL AND FILL COMPACTION, PROVIDING MINIMUM PERCENTAGE OF DENSITY SPECIFIED FOR EACH AREA CLASSIFICATION INDICATED BELOW:

PERCENTAGE OF MAXIMUM DENSITY REQUIREMENTS: COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DENSITY, IN ACCORDANCE WITH ASTM D 1557:

UNDER LAWN OR UNPAVED AREAS, COMPACT TOP 6 INCHES OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL AT 90 PERCENT MAXIMUM DENSITY.

UNDER WALKWAYS, COMPACT TOP 6 INCHES OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL AT 95 PERCENT MAXIMUM DENSITY.

UNDER STEPS AND PAVEMENTS, COMPACT TOP 12" OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL AT 95 PERCENT MAXIMUM DENSITY.

11. GRADING

1. GENERAL: UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING UNDER THIS SECTION, INCLUDING ADJACENT TRANSITION AREAS. SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES. COMPACT WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE INDICATED OR BETWEEN SUCH POINTS AND EXISTING GRADES.

LAWN OR UNPAVED AREAS: FINISH AREAS TO RECEIVE TOPSOIL TO WITHIN NOT MORE 0.10 FOOT ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS.

PAVEMENT & WALKS: SHAPE SURFACE OF AREAS UNDER WALKS TO LINE, GRADE AND CROSS-SECTION, WITH FINISH SURFACE NOT MORE THAN 0.10 FOOT ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION

COMPACTION: AFTER GRADING, COMPACT SUBGRADE SURFACES TO THE DEPTH AND INDICATED PERCENTAGE OF MAXIMUM OR RELATIVE DENSITY FOR EACH AREA CLASSIFICATION.

2. EROSION CONTROL

PROVIDE EROSION CONTROL METHODS IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

3. MAINTENANCE

PROTECTION OF GRADED AREAS: PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. KEEP FREE OF TRASH AND DEBRIS.

REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES.

RECONDITIONING COMPACTED AREAS: WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, SCARIFY SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

4. DISPOSAL OF EXCESS AND WASTE MATERIALS

EXCESS EXCAVATED MATERIAL SHALL BE DISTRIBUTED ON SITE PER OWNER AND/OR ARCHITECT DIRECTION
NO EXCESS EXCAVATED MATERIAL ANTICIPATED

REMOVE WASTE MATERIALS, INCLUDING TRASH AND DEBRIS AND DISPOSE OF IT OFF OWNER'S PROPERTY

III. ASPHALT PAVING

1. SITE CONDITIONS

WEATHER LIMITATIONS: APPLY PRIME AND TACK COATS WHEN AMBIENT TEMPERATURE IS ABOVE 50 DEGREES F (10 DEGREES C) AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES F (1 DEGREE C) FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. DO NOT APPLY WHEN BASE IS WET OR CONTAINS AN EXCESS OF MOISTURE.

CONSTRUCT HOT-MIXED ASPHALT SURFACE COURSE WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40 DEGREES F (4 DEGREES C) AND WHEN BASE IS DRY. BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30 DEGREES F (MINUS 1 DEGREE C) AND RISING.

GRADE CONTROL: ESTABLISH AND MAINTAIN REQUIRED LINES AND ELEVATIONS.

2. MATERIALS

GENERAL: USE LOCALLY AVAILABLE MATERIALS AND GRADATIONS THAT EXHIBIT A SATISFACTORY RECORD OF PREVIOUS INSTALLATIONS.

COARSE AGGREGATE: SOUND ANGULAR CRUSHED STONE, CRUSHED GRAVEL OR PROPERLY CURED CRUSHED BLAST FURNACE SLAG, COMPLYING WITH ASTM D 692-89.

FINE AGGREGATE: SHARP-EDGED NATURAL SAND OR SAND PREPARED FROM STONE, PROPERLY CURED BLAST FURNACE SLAG, GRAVEL, OR COMBINATIONS THEREOF, COMPLYING WITH ASTM D 1073.

ASPHALT CEMENT: ASTM D 3381 FOR VISCOSITY-GRADED MATERIAL; ASTM D 946 FOR PENETRATION-GRADED MATERIAL.

PRIME COAT: CUT-BACK ASPHALT TYPE, ASTM D 2027; MC-30, MC-70 OR MC-250.

3. ASPHALT-AGGREGATE MIXTURE

PROVIDE PLANT-MIXED, HOT-LAID ASPHALT-AGGREGATE MIXTURE COMPLYING WITH ST. LOUIS COUNTY STANDARD SPECIFICATIONS FOR TYPE "X" AND TYPE "C" ASPHALTIC CONCRETE.

4. SURFACE PREPARATION

GENERAL: REMOVE LOOSE MATERIAL FROM COMPACTED GRANULAR BASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT.

PRIME COAT: CUT BACK ASPHALT TYPE, ASTM D 2027; MC-30, MC-70 OR MC-250 APPLY AT RATE OF 0.20 TO 0.50 GALLON PER SQ. YD. OVER COMPACTED BASE.

TACK COAT: EMULSIFIED ASPHALT; ASTM D977 APPLY TO CONTACT SURFACES OF PREVIOUSLY CONSTRUCTED ASPHALT SURFACES AT A RATE OF 0.05 TO 0.15 GAL. PER SQ. YD. OF SURFACE.

5. PLACING MIX

GENERAL: PLACE HOT-MIXED ASPHALT MIXTURE ON PREPARED SURFACE, SPREAD, AND STRIKE OFF.

SPREAD MIXTURE AT MINIMUM TEMPERATURE OF 225 DEGREES F (107 DEGREES C).

PLACE AREAS INACCESSIBLE TO EQUIPMENT BY HAND. PLACE EACH COURSE TO REQUIRED GRADE, CROSS-SECTION, AND COMPACTED THICKNESS.

6. ROLLING

GENERAL: BEGIN ROLLING WHEN MIXTURE WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT.

COMPACT MIXTURE WITH HOT HAND TAMPERS OR VIBRATING PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS.

BREAKDOWN ROLLING: ACCOMPLISH BREAKDOWN OR INITIAL ROLLING IMMEDIATELY FOLLOWING ROLLING OF JOINTS AND OUTSIDE EDGE. CHECK SURFACE AFTER BREAKDOWN ROLLING AND REPAIR DISPLACED AREAS BY LOOSENING AND FILLING, IF REQUIRED, WITH HOT MATERIAL.

SECOND ROLLING: FOLLOW BREAKDOWN ROLLING AS SOON AS POSSIBLE, WHILE MIXTURE IS HOT. CONTINUE SECOND ROLLING UNTIL MIXTURE HAS BEEN EVENLY COMPACTED.

FINISH ROLLING: PERFORM FINISH ROLLING WHILE MIXTURE IS STILL WARM ENOUGH FOR REMOVAL OF ROLLER MARKS. CONTINUE ROLLING UNTIL ROLLER MARKS ARE ELIMINATED AND COURSE HAS ATTAINED 95 PERCENT LABORATORY DENSITY.

PATCHING: REMOVE AND REPLACE PAVING AREAS MIXED WITH FOREIGN MATERIALS AND DEFECTIVE AREAS. CUT OUT SUCH AREAS AND FILL WITH FRESH, HOT-MIXED ASPHALT. COMPACT BY ROLLING TO SPECIFIED SURFACE DENSITY AND SMOOTHNESS.

PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED.

ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.

IV. PORTLAND CEMENT CONCRETE PAVING

1. JOB CONDITIONS

TRAFFIC CONTROL: MAINTAIN ACCESS FOR VEHICULAR AND PEDESTRIAN TRAFFIC AS REQUIRED FOR OTHER CONSTRUCTION ACTIVITIES.

2. MATERIALS

FORMS: STEEL, WOOD, OR OTHER SUITABLE MATERIAL OF SIZE AND STRENGTH TO RESIST MOVEMENT DURING CONCRETE PLACEMENT AND TO RETAIN HORIZONTAL AND VERTICAL ALIGNMENT UNTIL REMOVAL. USE STRAIGHT FORMS, FREE OF DISTORTION AND DEFECTS.

USE FLEXIBLE SPRING STEEL FORMS OR LAMINATED BOARDS TO FORM RADIUS BENDS AS REQUIRED.

COAT FORMS WITH A NONSTAINING FORM RELEASE AGENT THAT WILL NOT DISCOLOR OR DEFACE SURFACE OF CONCRETE.

WELDED WIRE MESH: WELDED PLAIN COLD-DRAWN STEEL WIRE FABRIC, ASTM A 185.

REINFORCING BARS: DEFORMED STEEL BARS, ASTM A 615, GRADE 60.

JOINT DOWEL BARS: PLAIN STEEL BARS, ASTM A 615, GRADE 60. CUT BARS TRUE TO LENGTH WITH ENDS SQUARE AND FREE OF BURRS.

CONCRETE MATERIALS: COMPLY WITH REQUIREMENTS OF APPLICABLE "CONCRETE" NOTES FOR CONCRETE MATERIALS, ADMIXTURES, BONDING MATERIALS, CURING MATERIALS AND OTHERS AS REQUIRED.

3. CONCRETE MIX, DESIGN AND TESTING

COMPLY WITH REQUIREMENTS OF APPLICABLE "CONCRETE" NOTES FOR CONCRETE MIX DESIGN AND AS HEREIN SPECIFIED.

DESIGN MIX TO PRODUCE NORMAL-WEIGHT CONCRETE CONSISTING OF PORTLAND CEMENT, AGGREGATE, WATER-REDUCING OR HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER), AIR-ENTRAINING ADMIXTURE AND WATER TO PRODUCE THE FOLLOWING PROPERTIES:

COMPRESSIVE STRENGTH: 4000 PSI, MINIMUM AT 28 DAYS, UNLESS OTHERWISE INDICATED.

SLUMP LIMITS: 8 INCHES MINIMUM FOR CONCRETE CONTAINING HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER); 4 INCHES FOR OTHER CONCRETE
AIR CONTENT: 5 TO 8 PERCENT.

4. SURFACE PREPARATION

REMOVE LOOSE MATERIAL FROM COMPACTED SUBGRADE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.

5. FORM CONSTRUCTION

SET FORMS TO REQUIRED GRADES AND LINES, BRACED AND SECURED. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO THAT FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.

6. REINFORCEMENT

LOCATE, PLACE, AND SUPPORT REINFORCEMENT AS SPECIFIED IN "CAST IN PLACE CONCRETE" NOTES, UNLESS OTHERWISE INDICATED.

7. CONCRETE PLACEMENT

GENERAL: COMPLY WITH REQUIREMENTS OF "CONCRETE" NOTES FOR MIXING AND PLACING CONCRETE, AND AS HEREIN INDICATED. PLACE CONCRETE BY METHODS THAT PREVENT SEGREGATION OF MIX. CONSOLIDATE CONCRETE ALONG FACE OF FORMS AND ADJACENT TO TRANSVERSE JOINTS WITH INTERNAL VIBRATOR. KEEP VIBRATOR AWAY FROM JOINT ASSEMBLIES, REINFORCEMENT, OR SIDE FORMS. USE ONLY SQUARE-FACED SHOVELS FOR HAND-SPREADING AND CONSOLIDATION. CONSOLIDATE WITH CARE TO PREVENT DISLOCATION OF REINFORCING, DOWELS, AND JOINT DEVICES.

8. JOINTS

GENERAL: CONSTRUCT EXPANSION, WEAKENED-PLANE (CONTRACTION), AND CONSTRUCTION JOINTS TRUE TO LINE WITH FACE PERPENDICULAR TO SURFACE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO THE CENTERLINE, UNLESS OTHERWISE INDICATED.

TOOLED JOINTS: FORM WEAKENED-PLANE JOINTS IN FRESH CONCRETE BY GROOVING TOP PORTION WITH A RECOMMENDED CUTTING TOOL AND FINISHING EDGES WITH A JOINTER.

EXPANSION JOINTS: PROVIDE 1/2"x4" PREFORMED EXPANSION JOINT MATERIAL FOR EXPANSION JOINTS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, WALKS, AND OTHER FIXED OBJECTS, UNLESS OTHERWISE INDICATED. JOINTS SHALL BE FULL DEPTH WITH TOP EDGE 1/2 INCH BELOW FINISH SURFACE OF CONCRETE AND SEALED.

EXTEND JOINT MATERIAL FULL WIDTH AND DEPTH OF JOINT.

FURNISH JOINT MATERIAL IN ONE-PIECE LENGTHS FOR FULL WIDTH BEING PLACED WHEREVER POSSIBLE.

PROTECT TOP EDGE OF JOINT MATERIAL DURING CONCRETE PLACEMENT WITH A METAL CAP OR OTHER TEMPORARY MATERIAL. REMOVE PROTECTION AFTER CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.

9. CONCRETE FINISHING

AFTER STRIKING-OFF AND CONSOLIDATING CONCRETE, SMOOTH SURFACE BY SCREEDING AND FLOATING.

AFTER FLOATING, TEST SURFACE FOR TRUENESS WITH A 10-FT. STRAIGHTEDGE. DISTRIBUTE CONCRETE AS REQUIRED TO REMOVE SURFACE IRREGULARITIES, AND REFLOAT REPAIRED AREAS TO PROVIDE A CONTINUOUS SMOOTH FINISH.

WORK EDGES OF SLABS, GUTTERS, BACK TOP EDGE OF CURB AND FORMED JOINTS WITH AN EDGING TOOL AND ROUND TO 1/4" RADIUS, UNLESS OTHERWISE INDICATED. ELIMINATE TOOL MARKS ON CONCRETE SURFACE.

AFTER COMPLETION OF FLOATING AND WHEN EXCESS MOISTURE OR SURFACE SHEEN HAS DISAPPEARED, COMPLETE TROWELING AND FINISH SURFACE AS INDICATED ON DRAWINGS.

DO NOT REMOVE FORMS FOR 24 HOURS AFTER CONCRETE HAS BEEN PLACED. AFTER FORM REMOVAL, CLEAN ENDS OF JOINTS AND POINT-UP ANY MINOR HONEYCOMBED AREAS. REMOVE AND REPLACE AREAS OR SECTIONS WITH MAJOR DEFECTS, AS DIRECTED.

10. REPAIRS AND PROTECTIONS

REPAIR OR REPLACE BROKEN OR DEFECTIVE CONCRETE, AS DIRECTED.

PROTECT CONCRETE FROM DAMAGE UNTIL ACCEPTANCE OF WORK. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 14 DAYS AFTER PLACEMENT.

SWEEP CONCRETE PAVEMENT AND WASH FREE OF STAINS, DISCOLORATIONS, DIRT AND OTHER FOREIGN MATERIAL JUST BEFORE FINAL INSPECTION.

V. CAST-IN PLACE CONCRETE

1. QUALITY ASSURANCE

CODES AND STANDARDS: COMPLY WITH PROVISIONS OF FOLLOWING CODES, SPECIFICATIONS AND STANDARDS, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN OR SPECIFIED:

ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE".

2. FORM MATERIALS

FORMS FOR EXPOSED FINISH CONCRETE: PLYWOOD, METAL, METAL-FRAMED PLYWOOD FACED, OR OTHER ACCEPTABLE PANEL-TYPE MATERIALS, TO PROVIDE CONTINUOUS, STRAIGHT, SMOOTH, EXPOSED SURFACES. FURNISH IN LARGEST PRACTICABLE SIZES TO MINIMIZE NUMBER OF JOINTS AND TO CONFORM TO JOINT SYSTEM SHOWN ON DRAWINGS.

FORMS FOR UNEXPOSED FINISH CONCRETE: PLYWOOD, LUMBER, METAL, OR OTHER ACCEPTABLE MATERIAL. PROVIDE LUMBER DRESSED ON AT LEAST 2 EDGES AND ONE SIDE FOR TIGHT FIT.

FORMS FOR CYLINDRICAL COLUMNS AND SUPPORTS: METAL, FIBERGLASS-REINFORCED PLASTIC, OR PAPER OR FIBER TUBES. PROVIDE PAPER OR FIBER TUBES OF LAMINATED PLIES WITH WATER-RESISTANT ADHESIVE AND WAX-IMPREGNATED EXTERIOR FOR WEATHER AND MOISTURE PROTECTION. PROVIDE UNITS WITH SUFFICIENT WALL THICKNESS TO RESIST WET CONCRETE LOADS WITHOUT DEFORMATION.

FORM COATINGS: PROVIDE COMMERCIAL FORMULATION FORM-COATING COMPOUNDS WITH A MAXIMUM VOC OF 350 G/GL THAT WILL NOT BOND WITH, STAIN, OR ADVERSELY AFFECT CONCRETE SURFACES AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES.

FORM TIES: FACTORY-FABRICATED, ADJUSTABLE-LENGTH, REMOVABLE OR SNAP-OFF METAL FORM TIES, DESIGNED TO PREVENT FORM DEFLECTION AND TO PREVENT SPALLING CONCRETE UPON REMOVAL. PROVIDE UNITS THAT WILL LEAVE NO METAL CLOSER THAN 1-1/2 INCHES TO EXPOSED SURFACE.

3. REINFORCING MATERIALS REINFORCING BARS: ASTM A 615, GRADE 60 DEFORMED.

4. CONCRETE MATERIALS

PORTLAND CEMENT: ASTM C 150, TYPE I.

USE ONE BRAND OF CEMENT THROUGHOUT PROJECT UNLESS OTHERWISE ACCEPTABLE TO ARCHITECT.

NORMAL WEIGHT AGGREGATES: ASTM C 33 AND AS HEREIN SPECIFIED. PROVIDE AGGREGATES FROM A SINGLE SOURCE FOR EXPOSED CONCRETE.

FOR EXTERIOR EXPOSED SURFACES, DO NOT USE FINE OR COARSE AGGREGATES CONTAINING SPALLING-CAUSING DELETERIOUS SUBSTANCES.

WATER: DRINKABLE.

5. PROPORTIONING AND DESIGN OF MIXES

DESIGN MIXES TO PROVIDE NORMAL WEIGHT CONCRETE WITH THE FOLLOWING PROPERTIES, AS INDICATED ON DRAWINGS AND SCHEDULES:

4000-PSI, 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.58 MAXIMUM (NON-AIR-ENTRAINED), 0.46 MAXIMUM (AIR-ENTRAINED).

SLUMP LIMITS: PROPORTION AND DESIGN MIXES TO RESULT IN CONCRETE SLUMP AT POINT OF PLACEMENT AS FOLLOWS:

REINFORCED FOUNDATION SYSTEMS: NOT LESS THAN 1 INCH AND NOT MORE THAN 3 INCHES.

OTHER CONCRETE: NOT MORE THAN 4 INCHES.

6. CONCRETE MIXING

READY-MIX CONCRETE: COMPLY WITH REQUIREMENTS OF ASTM C94, AND AS SPECIFIED.

WHEN AIR TEMPERATURE IS BETWEEN 85 DEGREES F (30 DEGREES C) AND 90 DEGREES F (32 DEGREES C), REDUCE MIXING AND DELIVERY TIME FROM 1-1/2 HOURS TO 75 MINUTES, AND WHEN AIR TEMPERATURE IS ABOVE 90 DEGREES F (32 DEGREES C), REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES

7. PLACING REINFORCEMENT

GENERAL: COMPLY WITH CONCRETE REINFORCING STEEL INSTITUTE'S RECOMMENDED PRACTICE FOR "PLACING REINFORCING BARS", FOR DETAILS AND METHODS OF REINFORCEMENT PLACEMENT AND SUPPORTS AND HEREIN SPECIFIED.

CLEAN REINFORCEMENT OF LOOSE RUST AND MILL SCALE, EARTH, ICE, AND OTHER MATERIALS THAT REDUCE OR DESTROY BOND WITH CONCRETE.

ACCURATELY POSITION, SUPPORT AND SECURE REINFORCEMENT AGAINST DISPLACEMENT.

PLACE REINFORCEMENT TO OBTAIN AT LEAST MINIMUM COVERAGES FOR CONCRETE PROTECTION. ARRANGE, SPACE, AND SECURELY TIE BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT OPERATIONS. SET WIRE TIES SO ENDS ARE DIRECTED INTO CONCRETE, NOT TOWARD EXPOSED CONCRETE SURFACES.

INSTALL WELDED WIRE FABRIC IN AS LONG LENGTHS AS PRACTICABLE. LAP ADJOINING PIECES AT LEAST ONE FULL MESH AND LACE SPLICES WITH WIRE. OFFSET LAPS OF ADJOINING WIDTHS TO PREVENT CONTINUOUS LAPS IN EITHER DIRECTION.

8. PREPARATION OF FORM SURFACES

GENERAL: COAT CONTACT SURFACES OF FORMS WITH AN APPROVED, NONRESIDUAL, LOW-VOC, FORM-COATING COMPOUND BEFORE REINFORCEMENT IS PLACED.

DO NOT ALLOW EXCESS FORM-COATING MATERIAL TO ACCUMULATE IN FORMS OR TO COME INTO CONTACT WITH IN-PLACE CONCRETE SURFACES AGAINST WHICH FRESH CONCRETE WILL BE PLACED. APPLY IN COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS.

COAT STEEL FORMS WITH A NONSTAINING, RUST-PREVENTATIVE MATERIAL. RUST-STAINED STEEL FORMWORK IS NOT ACCEPTABLE.

9. CONCRETE PLACEMENT

INSPECTION: BEFORE PLACING CONCRETE, INSPECT AND COMPLETE FORMWORK INSTALLATION, REINFORCING STEEL, AND ITEMS TO BE EMBEDDED OR CAST IN. NOTIFY OTHER CRAFTS TO PERMIT INSTALLATION OF THEIR WORK; COOPERATE WITH OTHER TRADES IN SETTING SUCH WORK.

GENERAL: COMPLY WITH ACI 304, "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE", AND AS HEREIN SPECIFIED.

DEPOSIT CONCRETE CONTINUOUSLY OR IN LAYERS OF SUCH THICKNESS THAT NO CONCRETE WILL BE PLACED ON CONCRETE THAT HAS HARDENED SUFFICIENTLY TO CAUSE THE FORMATION OF SEAMS OR PLANES OF WEAKNESS. IF A SECTION CANNOT BE PLACED CONTINUOUSLY, PROVIDE CONSTRUCTION JOINTS AS HEREIN SPECIFIED. DEPOSIT CONCRETE TO AVOID SEGREGATION AT ITS FINAL LOCATION.

PLACING CONCRETE IN FORMS: DEPOSIT CONCRETE IN FORMS IN HORIZONTAL LAYERS NOT DEEPER THAN 24 INCHES AND IN A MANNER TO AVOID INCLINED CONSTRUCTION JOINTS. WHERE PLACEMENT CONSISTS OF SEVERAL LAYERS, PLACE EACH LAYER WHILE PRECEDING LAYER IS STILL PLASTIC TO AVOID COLD JOINTS.

CONSOLIDATE PLACED CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING, OR TAMPING. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH ACI 309.

DO NOT USE VIBRATORS TO TRANSPORT CONCRETE INSIDE FORMS. INSERT AND WITHDRAW VIBRATORS VERTICALLY AT UNIFORMLY SPACED LOCATIONS NOT FARTHER THAN VISIBLE EFFECTIVENESS OF MACHINE. PLACE VIBRATORS TO RAPIDLY PENETRATE PLACED LAYER AND AT LEAST 6 INCHES INTO PRECEDING LAYER. DO NOT INSERT VIBRATORS INTO LOWER LAYERS OF CONCRETE THAT HAVE BEGUN TO SET. AT EACH INSERTION LIMIT DURATION OF VIBRATION TO TIME NECESSARY TO CONSOLIDATE CONCRETE AND COMPLETE EMBEDMENT OF REINFORCEMENT AND OTHER EMBEDDED ITEMS WITHOUT CAUSING SEGREGATION OF MIX.

PLACING CONCRETE SLABS: DEPOSIT AND CONSOLIDATE CONCRETE SLABS IN A CONTINUOUS OPERATION, WITHIN LIMITS OF CONSTRUCTION JOINTS, UNTIL THE PLACING OF A PANEL OR SECTION IS COMPLETED.

CONSOLIDATE CONCRETE DURING PLACING OPERATIONS SO THAT CONCRETE IS THOROUGHLY WORKED AROUND REINFORCEMENT AND OTHER EMBEDDED ITEMS AND INTO CORNERS.

BRING SLAB SURFACES TO CORRECT LEVEL WITH STRAIGHTEDGE AND STRIKE OFF. USE BULL FLOATS OR DARBIES TO SMOOTH SURFACE, FREE OF HUMPS OR HOLLOWS. DO NOT DISTURB SLAB SURFACES PRIOR TO BEGINNING FINISHING OPERATIONS.

MAINTAIN REINFORCING IN PROPER POSITION DURING CONCRETE PLACEMENT.

COLD-WEATHER PLACING: COMPLY WITH PROVISIONS OF ACI 306 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES. WHEN AIR TEMPERATURE HAS FALLEN TO OR IS EXPECTED TO FALL BELOW 40 DEGREES F (4 DEGREES C), UNIFORMLY HEAT WATER AND AGGREGATES BEFORE MIXING TO OBTAIN A CONCRETE MIXTURE TEMPERATURE OF NOT LESS THAN 50 DEGREES F (10 DEGREES C) AND NOT MORE THAN 80 DEGREES F (27 DEGREES C) AT POINT OF PLACEMENT.

DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE OR SNOW. DO NOT PLACE CONCRETE ON FROZEN SUBGRADE OR ON SUBGRADE CONTAINING FROZEN MATERIALS.

DO NOT USE CALCIUM CHLORIDE, SALT, AND OTHER MATERIALS CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS UNLESS OTHERWISE ACCEPTED IN MIX DESIGNS.

HOT-WEATHER PLACING: WHEN HOT WEATHER CONDITIONS EXIST THAT WOULD SERIOUSLY IMPAIR QUALITY AND STRENGTH OF CONCRETE,

VI. ROUGH CARPENTRY

GENERAL

1. THIS SECTION INCLUDES FRAMING WITH DIMENSION LUMBER, FRAMING WITH ENGINEERED WOOD PRODUCTS, WOOD BLOCKING AND NAILERS.

2. DEFINITIONS:

EXPOSED FRAMING: FRAMING NOT CONCEALED BY OTHER CONSTRUCTION.

DIMENSION LUMBER: LUMBER OF 2 INCHES NOMINAL OR GREATER BUT LESS THAN 5 INCHES NOMINAL IN LEAST DIMENSION.

3. DELIVERY, STORAGE, AND HANDLING: STACK LUMBER FLAT WITH SPACERS BENEATH AND BETWEEN EACH BUNDLE TO PROVIDE AIR CIRCULATION. PROTECT LUMBER FROM WEATHER BY COVERING WITH WATERPROOF SHEETING, SECURELY ANCHORED. PROVIDE FOR AIR CIRCULATION AROUND STACKS AND UNDER COVERINGS.

PRODUCTS

4. WOOD PRODUCTS, GENERAL

LUMBER: DOC*PS*20 AND APPLICABLE RULES OF GRADING AGENCIES INDICATED. IF NO GRADING AGENCY IS INDICATED, PROVIDE LUMBER THAT COMPLIES WITH THE APPLICABLE RULES OF ANY RULES-WRITING AGENCY CERTIFIED BY THE ALSC BOARD OF REVIEW. PROVIDE LUMBER GRADED BY AN AGENCY CERTIFIED BY THE ALSC BOARD OF REVIEW TO INSPECT AND GRADE LUMBER UNDER THE RULES INDICATED.

FACTORY MARK EACH PIECE OF LUMBER WITH GRADE STAMP OF GRADING AGENCY.

PROVIDE DRESSED LUMBER, S4S, UNLESS OTHERWISE INDICATED.

MAXIMUM MOISTURE CONTENT OF LUMBER: 19 PERCENT FOR 2-INCH NOMINAL THICKNESS OR LESS, NO LIMIT FOR MORE THAN 2-INCH NOMINAL UNLESS OTHERWISE INDICATED.

ENGINEERED WOOD PRODUCTS: PROVIDE ENGINEERED WOOD PRODUCTS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AND FOR WHICH CURRENT MODEL CODE RESEARCH OR EVALUATION REPORTS EXIST THAT SHOW COMPLIANCE WITH BUILDING CODE IN EFFECT FOR PROJECT.

5. DIMENSION LUMBER FRAMING

LOAD-BEARING WALLS: NO.*2 GRADE.
SPECIES: HEM-FIR (NORTH); NLGA, SOUTHERN PINE; SPIB, DOUGLAS FIR-LARCH; WCLIB OR WWPA.

RAFTERS AND OTHER FRAMING: CONSTRUCTION OR NO.*2 GRADE.
SPECIES: HEM-FIR (NORTH); NLGA, SOUTHERN PINE; SPIB, DOUGLAS FIR-LARCH; WCLIB OR WWPA.

EXPOSED EXTERIOR FRAMING: PROVIDE MATERIAL HAND-SELECTED FOR UNIFORMITY OF APPEARANCE AND FREEDOM FROM CHARACTERISTICS ON EXPOSED SURFACES AND EDGES, THAT WOULD IMPAIR FINISH APPEARANCE, INCLUDING DECAY, HONEYCOMB, KNOT-HOLES, SHAKE, SPLITS, TORN GRAIN, AND WANE.
SPECIES AND GRADE: AS INDICATED ABOVE FOR LOAD-BEARING CONSTRUCTION OF SAME TYPE.

6. ENGINEERED WOOD PRODUCTS

LAMINATED-VENEER LUMBER: STRUCTURAL COMPOSITE LUMBER MADE FROM WOOD VENEERS WITH GRAIN PRIMARILY PARALLEL TO MEMBER LENGTHS, EVALUATED AND MONITORED ACCORDING TO ASTM*D*5456 AND MANUFACTURED WITH AN EXTERIOR-TYPE ADHESIVE COMPLYING WITH ASTM*D*2559

7. MISCELLANEOUS LUMBER

GENERAL: PROVIDE MISCELLANEOUS LUMBER INDICATED AND LUMBER FOR SUPPORT OR ATTACHMENT OF OTHER CONSTRUCTION, INCLUDING BLOCKING AND NAILERS.

FOR ITEMS OF DIMENSION LUMBER SIZE, PROVIDE CONSTRUCTION OR NO.*2 GRADE LUMBER OF ANY SPECIES.

FOR BLOCKING NOT USED FOR ATTACHMENT OF OTHER CONSTRUCTION, UTILITY, STUD, OR NO.*3 GRADE LUMBER OF ANY SPECIES MAY BE USED PROVIDED THAT IT IS CUT AND SELECTED TO ELIMINATE DEFECTS THAT WILL INTERFERE WITH ITS ATTACHMENT AND PURPOSE.

FOR BLOCKING AND NAILERS USED FOR ATTACHMENT OF OTHER CONSTRUCTION, SELECT AND CUT LUMBER TO ELIMINATE KNOTS AND OTHER DEFECTS THAT WILL INTERFERE WITH ATTACHMENT OF OTHER WORK.

8 FASTENERS

GENERAL: PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURE

WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IN GROUND CONTACT, PRESSURE-PRESERVATIVE TREATED, OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH HOT-DIP ZINC COATING COMPLYING WITH ASTM*A*153/A*153M OR TYPE*304 STAINLESS STEEL.

GALVANIZED-STEEL SHEET: HOT-DIP, ZINC-COATED STEEL SHEET COMPLYING WITH ASTM*A*653/A*653M, G60 COATING DESIGNATION.

JOIST HANGERS: U-SHAPED JOIST HANGERS WITH 2-INCH LONG SEAT AND 1-1/4-INCH WIDE NAILING FLANGES AT LEAST 85 PERCENT OF JOIST DEPTH. THICKNESS: 0.050 INCH.

EXECUTION

9. INSTALLATION, GENERAL

SET ROUGH CARPENTRY TO REQUIRED LEVELS AND LINES, WITH MEMBERS PLUMB, TRUE TO LINE, CUT, AND FITTED. FIT ROUGH CARPENTRY TO OTHER CONSTRUCTION; SCRIBE AND COPE AS NEEDED FOR ACCURATE FIT. LOCATE FURRING, NAILERS, BLOCKING, AND SIMILAR SUPPORTS TO COMPLY WITH REQUIREMENTS FOR ATTACHING OTHER CONSTRUCTION.

FRAMING STANDARD: COMPLY WITH AF&PA'S WCD*1,"DETAILS FOR CONVENTIONAL WOOD FRAME CONSTRUCTION," UNLESS OTHERWISE INDICATED.

FRAMING WITH ENGINEERED WOOD PRODUCTS: INSTALL ENGINEERED WOOD PRODUCTS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN SUPPORTS UNLESS OTHERWISE INDICATED.

PROVIDE BLOCKING AND FRAMING AS INDICATED AND AS REQUIRED TO SUPPORT FACING MATERIALS, FIXTURES, SPECIALTY ITEMS, AND TRIM.

SORT AND SELECT LUMBER SO THAT NATURAL CHARACTERISTICS WILL NOT INTERFERE WITH INSTALLATION OR WITH FASTENING OTHER MATERIALS TO LUMBER. DO NOT USE MATERIALS WITH DEFECTS THAT INTERFERE WITH FUNCTION OF MEMBER OR PIECES THAT ARE TOO SMALL TO USE WITH MINIMUM NUMBER OF JOINTS OR OPTIMUM JOINT ARRANGEMENT.

SECURELY ATTACH ROUGH CARPENTRY WORK TO SUBSTRATE BY ANCHORING AND FASTENING AS INDICATED, COMPLYING WITH THE FOLLOWING: NES*NER-272 FOR POWER-DRIVEN FASTENERS.

USE STEEL COMMON NAILS UNLESS OTHERWISE INDICATED. SELECT FASTENERS OF SIZE THAT WILL NOT FULLY PENETRATE MEMBERS WHERE OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR WILL RECEIVE FINISH MATERIALS. MAKE TIGHT CONNECTIONS BETWEEN MEMBERS. INSTALL FASTENERS WITHOUT SPLITTING WOOD. DRIVE NAILS SNUG BUT DO NOT COUNTERSINK NAIL HEADS UNLESS OTHERWISE INDICATED.

FOR EXPOSED WORK, ARRANGE FASTENERS IN STRAIGHT ROWS PARALLEL WITH EDGES OF MEMBERS, WITH FASTENERS EVENLY SPACED, AND WITH ADJACENT ROWS STAGGERED.

10. WOOD BLOCKING, AND NAILER INSTALLATION

INSTALL WHERE INDICATED AND WHERE REQUIRED FOR ATTACHING OTHER WORK. FORM TO SHAPES INDICATED AND CUT AS REQUIRED FOR TRUE LINE AND LEVEL OF ATTACHED WORK. COORDINATE LOCATIONS WITH OTHER WORK INVOLVED.

ATTACH ITEMS TO SUBSTRATES TO SUPPORT APPLIED LOADING. RECESS BOLTS AND NUTS FLUSH WITH SURFACES UNLESS OTHERWISE INDICATED.

11. RAFTER FRAMING INSTALLATION

RAFTERS: NOTCH TO FIT EXTERIOR WALL PLATES AND USE METAL FRAMING ANCHORS. DOUBLE RAFTERS TO FORM HEADERS AND TRIMMERS AT OPENINGS IN ROOF FRAMING, IF ANY, AND SUPPORT WITH METAL HANGERS. WHERE RAFTERS ABUT AT RIDGE, PLACE DIRECTLY OPPOSITE EACH OTHER AND NAIL TO RIDGE MEMBER OR USE METAL RIDGE HANGERS.

PROVIDE SPECIAL FRAMING AS INDICATED FOR EAVES, OVERHANGS, DORMERS, AND SIMILAR CONDITIONS IF ANY.

VII. SHEATHING

GENERAL

1. THIS SECTION INCLUDES WALL SHEATHING AND ROOF SHEATHING.

2. DELIVERY, STORAGE, AND HANDLING

STACK PANELS FLAT WITH SPACERS BENEATH AND BETWEEN EACH BUNDLE TO PROVIDE AIR CIRCULATION. PROTECT SHEATHING FROM WEATHER BY COVERING WITH WATERPROOF SHEETING, SECURELY ANCHORED. PROVIDE FOR AIR CIRCULATION AROUND STACKS AND UNDER COVERINGS.

PRODUCTS

3. WALL SHEATHING

ORIENTED-STRAND-BOARD WALL SHEATHING: EXPOSURE 1, SHEATHING. NOMINAL THICKNESS: NOT LESS THAN 1/2 INCH

4 ROOF SHEATHING

ORIENTED-STRAND-BOARD ROOF SHEATHING: EXPOSURE 1, SHEATHING. NOMINAL THICKNESS: NOT LESS THAN 1/2 INCH.

5. FASTENERS

GENERAL: PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURE.

FOR ROOF AND WALL SHEATHING, PROVIDE FASTENERS WITH HOT-DIP ZINC COATING COMPLYING WITH ASTM*A*153/A*153M.

EXECUTION

6. INSTALLATION, GENERAL

DO NOT USE MATERIALS WITH DEFECTS THAT IMPAIR QUALITY OF SHEATHING OR PIECES THAT ARE TOO SMALL TO USE WITH MINIMUM NUMBER OF JOINTS OR OPTIMUM JOINT ARRANGEMENT. ARRANGE JOINTS SO THAT PIECES DO NOT SPAN BETWEEN FEWER THAN THREE SUPPORT MEMBERS.

CUT PANELS AT PENETRATIONS, EDGES, AND OTHER OBSTRUCTIONS OF WORK; FIT TIGHTLY AGAINST ABUTTING CONSTRUCTION UNLESS OTHERWISE INDICATED.

USE COMMON WIRE NAILS UNLESS OTHERWISE INDICATED. SELECT FASTENERS OF SIZE THAT WILL NOT FULLY PENETRATE MEMBERS WHERE OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR WILL RECEIVE FINISH MATERIALS. MAKE TIGHT CONNECTIONS. INSTALL FASTENERS WITHOUT SPLITTING WOOD.

COORDINATE WALL AND ROOF SHEATHING INSTALLATION WITH FLASHING AND JOINT-SEALANT INSTALLATION SO THESE MATERIALS ARE INSTALLED IN SEQUENCE AND MANNER THAT PREVENT EXTERIOR MOISTURE FROM PASSING THROUGH COMPLETED ASSEMBLY.

COORDINATE SHEATHING INSTALLATION WITH INSTALLATION OF MATERIALS INSTALLED OVER SHEATHING SO SHEATHING IS NOT EXPOSED TO PRECIPITATION OR LEFT EXPOSED AT END OF THE WORKDAY WHEN RAIN IS FORECAST.

VIII. MISCELLANEOUS CARPENTRY

1. THE GENERAL CONTRACTOR MUST ASSUME THE RESPONSIBILITY OF VERIFYING DETAILS AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND SHOPING. VERIFY ALL COLOR SELECTIONS WITH THE OWNER. OBTAIN ALL BUILDING AND FIRE PERMITS BEFORE BEGINNING CONSTRUCTION.

2. SHEET METAL, FLASHING AND COUNTER FLASHING SHALL BE WATERTIGHT/WEATHERPROOF AND COMPLY WITH "ARCHITECTURAL SHEET METAL MANUAL" BY SMACNA. FLASHING SHALL BE ALUMINUM UNLESS OTHERWISE NOTED, REQUIRED BY MANUFACTURERS, AND/OR WHERE ALUMINUM IS INCOMPATIBLE WITH OTHER COMPONENTS OR PRODUCTS.

3. ROOFING: PROVIDE AND/OR INSTALL THE ROOFING SHOWN ON THE DRAWINGS AND EVERYTHING REQUIRED TO COMPLETE A GOOD WEATHERTIGHTROOF INSTALLATION THAT QUALIFIES FOR THE MANUFACTURER'S WARRANTY, WHERE APPLICABLE. CONTRACTOR SUPPLIED CORRUGATED METAL ROOFING SHALL BE "U9" CORRUGATED, PAINTED PANELS THAT REPLICATE THE LOOK OF A REAL RUSTED ROOF, "CORTEN A2P RAW" BY WESTERN STATES METAL ROOFING, 855-426-1836 (OR APPROVED EQUAL). FELT UNDERLAYMENT SHALL CONFORM TO ASTM D 226, AND SHALL BE 15# FELT. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

4. SOFFIT PANELS SHALL BE CELLULAR PVC 5/16" SHEETS AVAILABLE FROM AZEK TRIMBOARDS (OR APPROVED EQUAL), VYCON CORP., 20811 K 100TH STREET, LENEXA, KS 66220, 913-322-2435. CELLULAR PVC MATERIAL SHALL BE FREE OF VOIDS, HOLES, CRACKS, FOREIGN INCLUSIONS AND OTHER DEFECTS. UNIFORM SURFACE SHALL BE FREE FROM CUPPING, WARPING AND TWISTING. PROVIDE MANUFACTURER'S 25 YEAR WARRANTY.

FASTENERS - ALL TYPES OF DURABLE FASTENERS (STAINLESS STEEL AND/OR HOT DIPPED-GALVANIZED) THAT WORK WELL WITH WOOD ARE ACCEPTABLE. FASTENERS FROM A NAIL GUN WORK WELL. STANDARD BOX NAILS WITH A FULL ROUND HEAD ARE PREFERRED.

ADHESIVES - BONDING AZEK TO AZEK, SOLVENT BASED ADHESIVES SYSTEMS USED FOR RIGID PVC PIPE WORK WELL. LATEX ADHESIVES PROVIDE MORE WORKING TIME. FOR BONDING AZEK TO VARIOUS SUBSTRATES - IN GENERAL CONTACT CEMENT, EPOXY, RUBBER BASED AND URETHANE ADHESIVES ARE ACCEPTABLE.

SEALANTS - USE URETHANE, POLYURETHANE OR ACRYLIC BASED SEALANTS WITHOUT SILICONE

INSTALLATION - COMPLY WITH ALL MANUFACTURER'S PRODUCT INSTALLATION INSTRUCTIONS AND TECHNICAL BULLETIN INSTRUCTIONS.

5. PAINTING OF PVC SOFFIT AND WOOD TRIM BOARDS INDICATED TO BE PAINTED SHALL BE DONE USING COMMERCIAL GRADE, PREMIUM, EXTERIOR 100% ACRYLIC LATEX PAINT BY SHERWIN-WILLIAMS, PITTSBURGH PAINT, PORTER PAINT, BENJAMIN MOORE, OR APPROVED EQUAL, COLORS TO BE SELECTED. PREPARE AND PRIME ALL SURFACES PER MANUFACTURER'S REQUIREMENTS. SOFFIT PANELS TO BE PAINTED WHITE UNLESS OTHERWISE INDICATED

IX. PAINTING

GENERAL SPECIFICATIONS

1. WORK INCLUDED

THIS SECTION INCLUDES SURFACE PREPARATION AND FIELD PAINTING OF EXPOSED EXTERIOR ITEMS AND SURFACES

PAINT EXPOSED SURFACES INDICATED ON DRAWING. IF A COLOR OF FINISH IS NOT INDICATED, ARCHITECT WILL SELECT FROM STANDARD COLORS AND FINISHES AVAILABLE.

DO NOT PAINT PREFINISHED ITEMS, CONCEALED SURFACES, FINISHED METAL SURFACES, OPERATING PARTS, AND LABELS.

2. SUBMITTALS

PRODUCT DATA: FOR EACH PAINT SYSTEM INDICATED. INCLUDE PRIMERS.

SAMPLES FOR VERIFICATION: FOR EACH COLOR AND MATERIAL TO BE APPLIED, WITH TEXTURE TO SIMULATE ACTUAL CONDITIONS, ON REPRESENTATIVE SAMPLES OF THE ACTUAL SUBSTRATE.

3. QUALITY ASSURANCE

SOURCE LIMITATIONS: OBTAIN PRIMERS FOR EACH COATING SYSTEM FROM THE SAME MANUFACTURER AS THE FINISH COATS.

4. DELIVERY, STORAGE, AND HANDLING

DELIVER MATERIALS TO PROJECT SITE IN MANUFACTURER'S ORIGINAL, UNOPENED PACKAGES AND CONTAINERS BEARING MANUFACTURER'S NAME AND LABEL.

STORE MATERIALS NOT IN USE IN TIGHTLY COVERED CONTAINERS IN A WELL-VENTILATED AREA AT A MINIMUM AMBIENT TEMPERATURE OF 45°DEG°F. MAINTAIN STORAGE CONTAINERS IN A CLEAN CONDITION, FREE OF FOREIGN MATERIALS AND RESIDUE.

5. PROJECT CONDITIONS

APPLY WATERBORNE PAINTS ONLY WHEN TEMPERATURES OF SURFACES TO BE PAINTED AND SURROUNDING AIR ARE BETWEEN 50 AND 90°DEG°F.

APPLY SOLVENT-THINNED PAINTS ONLY WHEN TEMPERATURES OF SURFACES TO BE PAINTED AND SURROUNDING AIR ARE BETWEEN 45 AND 95°DEG°F .

DO NOT APPLY PAINT IN SNOW, RAIN, FOG, OR MIST; OR WHEN RELATIVE HUMIDITY EXCEEDS 85 PERCENT; OR AT TEMPERATURES LESS THAN 5°DEG°F ABOVE THE DEW POINT; OR TO DAMP OR WET SURFACES.

PRODUCTS

6. PAINT MATERIALS, GENERAL

MATERIAL COMPATIBILITY: PROVIDE BLOCK FILLERS, PRIMERS, AND FINISH-COAT MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH THE SUBSTRATES INDICATED UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

MATERIAL QUALITY: PROVIDE MANUFACTURER'S BEST-QUALITY PAINT MATERIAL OF THE VARIOUS COATING TYPES SPECIFIED THAT ARE FACTORY FORMULATED AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED. PAINT-MATERIAL CONTAINERS NOT DISPLAYING MANUFACTURER'S PRODUCT IDENTIFICATION WILL NOT BE ACCEPTABLE.

PROPRIETARY NAMES: USE OF MANUFACTURER'S PROPRIETARY PRODUCT NAMES TO DESIGNATE COLORS OR MATERIALS IS NOT INTENDED TO IMPLY THAT PRODUCTS NAMED ARE REQUIRED TO BE USED TO THE EXCLUSION OF EQUIVALENT PRODUCTS OF OTHER MANUFACTURERS. FURNISH MANUFACTURER'S MATERIAL DATA AND CERTIFICATES OF PERFORMANCE FOR PROPOSED SUBSTITUTIONS.

COLORS: AS INDICATED ON THE DRAWINGS AND/OR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

7. EXTERIOR AND INTERIOR FINISH COATS

EXTERIOR SATIN ACRYLIC ENAMEL: FACTORY-FORMULATED SATIN WATERBORNE ACRYLIC-LATEX ENAMEL FOR EXTERIOR APPLICATION.

GLIDDEN PROFESSIONAL: FORTIS 450 EXTERIOR SATIN PAINT; APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.2 MILS.

EXECUTION

8. EXAMINATION

EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH APPLICATOR PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR PAINT APPLICATION.

PROCEED WITH PAINT APPLICATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES RECEIVING PAINT ARE THOROUGHLY DRY.

START OF PAINTING WILL BE CONSTRUED AS APPLICATOR'S ACCEPTANCE OF SURFACES AND CONDITIONS WITHIN A PARTICULAR AREA.

9. PREPARATION

GENERAL: REMOVE HARDWARE AND HARDWARE ACCESSORIES, PLATES, MACHINED SURFACES, LIGHTING FIXTURES, AND SIMILAR ITEMS ALREADY INSTALLED THAT ARE NOT TO BE PAINTED. IF REMOVAL IS IMPRACTICAL OR IMPOSSIBLE BECAUSE OF SIZE OR HEIGHT OF THE ITEM, PROVIDE SURFACE-APPLIED PROTECTION BEFORE SURFACE PREPARATION AND PAINTING.

CLEANING: BEFORE APPLYING PAINT OR OTHER SURFACE TREATMENTS, CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF THE VARIOUS COATINGS. REMOVE OIL AND GREASE BEFORE CLEANING.

SURFACE PREPARATION: CLEAN AND PREPARE SURFACES TO BE PAINTED ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR EACH PARTICULAR SUBSTRATE CONDITION AND AS SPECIFIED.

MATERIAL PREPARATION: MIX AND PREPARE PAINT MATERIALS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

10. APPLICATION

GENERAL: APPLY PAINT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. USE APPLICATORS AND TECHNIQUES BEST SUITED FOR SUBSTRATE AND TYPE OF MATERIAL BEING APPLIED. ALL PAINTED SURFACES SHALL RECEIVE 2 FINISH COATS OVER A PRIMER COAT.

DO NOT PAINT OVER DIRT, RUST, SCALE, GREASE, MOISTURE, SCUFFED SURFACES, OR CONDITIONS DETRIMENTAL TO FORMATION OF A DURABLE PAINT FILM.

PROVIDE FINISH COATS THAT ARE COMPATIBLE WITH PRIMERS USED.

SAND LIGHTLY BETWEEN EACH SUCCEEDING ENAMEL COAT.

SCHEDULING PAINTING: APPLY FIRST COAT TO SURFACES THAT HAVE BEEN CLEANED, PRETREATED, OR OTHERWISE PREPARED FOR PAINTING AS SOON AS PRACTICABLE AFTER PREPARATION AND BEFORE SUBSEQUENT SURFACE DETERIORATION.

THE NUMBER OF COATS AND FILM THICKNESS REQUIRED ARE THE SAME REGARDLESS OF APPLICATION METHOD. DO NOT APPLY SUCCEEDING COATS UNTIL PREVIOUS COAT HAS CURED AS RECOMMENDED BY MANUFACTURER. IF SANDING IS REQUIRED TO PRODUCE A SMOOTH, EVEN SURFACE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, SAND BETWEEN APPLICATIONS

IF UNDERCOATS OR OTHER CONDITIONS SHOW THROUGH FINAL COAT OF PAINT, APPLY ADDITIONAL COATS UNTIL PAINT FILM IS OF UNIFORM FINISH, COLOR, AND APPEARANCE. GIVE SPECIAL ATTENTION TO ENSURE THAT EDGES, CORNERS, CREVICES, WELDS, AND EXPOSED FASTENERS RECEIVE A DRY FILM THICKNESS EQUIVALENT TO THAT OF FLAT SURFACES.

ALLOW SUFFICIENT TIME BETWEEN SUCCESSIVE COATS TO PERMIT PROPER DRYING. DO NOT RECOAT SURFACES UNTIL PAINT HAS DRIED TO WHERE IT FEELS FIRM, AND DOES NOT DEFORM OR FEEL STICKY UNDER MODERATE THUMB PRESSURE, AND UNTIL APPLICATION OF ANOTHER COAT OF PAINT DOES NOT CAUSE UNDERCOAT TO LIFT OR LOSE ADHESION.

APPLICATION PROCEDURES: APPLY PAINTS AND COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATORS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

BRUSHES: USE BRUSHES BEST SUITED FOR TYPE OF MATERIAL APPLIED. USE BRUSH OF APPROPRIATE SIZE FOR SURFACE OR ITEM BEING PAINTED.

ROLLERS: USE ROLLERS OF CARPET, VELVET-BACK, OR HIGH-PILE SHEEP'S WOOL AS RECOMMENDED BY MANUFACTURER FOR MATERIAL AND TEXTURE REQUIRED.

SPRAY EQUIPMENT: USE AIRLESS SPRAY EQUIPMENT WITH ORIFICE SIZE AS RECOMMENDED BY MANUFACTURER FOR MATERIAL AND TEXTURE REQUIRED.

MINIMUM COATING THICKNESS: APPLY PAINT MATERIALS NO THINNER THAN MANUFACTURER'S RECOMMENDED SPREADING RATE TO ACHIEVE DRY FILM THICKNESS INDICATED. PROVIDE TOTAL DRY FILM THICKNESS OF THE ENTIRE SYSTEM AS RECOMMENDED BY MANUFACTURER.

PRIME COATS: BEFORE APPLYING FINISH COATS, APPLY A PRIME COAT, AS RECOMMENDED BY MANUFACTURER, TO MATERIAL THAT IS REQUIRED TO BE PAINTED OR FINISHED AND THAT HAS NOT BEEN PRIME COATED BY OTHERS. RECOAT PRIMED AND SEALED SURFACES WHERE EVIDENCE OF SUCTION SPOTS OR UNSEALED AREAS IN FIRST COAT APPEARS, TO ENSURE A FINISH COAT WITH NO BURN-THROUGH OR OTHER DEFECTS DUE TO INSUFFICIENT SEALING.

PIGMENTED (OPAQUE) FINISHES: COMPLETELY COVER SURFACES AS NECESSARY TO PROVIDE A SMOOTH, OPAQUE SURFACE OF UNIFORM FINISH, COLOR, APPEARANCE, AND COVERAGE. CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS WILL NOT BE ACCEPTABLE.

COMPLETED WORK: MATCH APPROVED SAMPLES FOR COLOR, TEXTURE, AND COVERAGE. REMOVE, REFINISH, OR REPAINT WORK NOT COMPLYING WITH REQUIREMENTS.

11. CLEANING

CLEANUP: AT THE END OF EACH WORKDAY, REMOVE EMPTY CANS, RAGS, RUBBISH, AND OTHER DISCARDED PAINT MATERIALS FROM PROJECT SITE.

AFTER COMPLETING PAINTING, CLEAN GLASS AND PAINT-SPATTERED SURFACES. REMOVE SPATTERED PAINT BY WASHING AND SCRAPING WITHOUT SCRATCHING OR DAMAGING ADJACENT FINISHED SURFACES.

12. PROTECTION

PROTECT WORK OF OTHER TRADES, WHETHER BEING PAINTED OR NOT, AGAINST DAMAGE FROM PAINTING. CORRECT DAMAGE BY CLEANING, REPAIRING OR REPLACING, AND REPAINTING, AS APPROVED BY ARCHITECT.

PROVIDE "WET PAINT" SIGNS TO PROTECT NEWLY PAINTED FINISHES. AFTER COMPLETING PAINTING OPERATIONS, REMOVE TEMPORARY PROTECTIVE WRAPPINGS PROVIDED BY OTHERS TO PROTECT THEIR WORK.

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LANDSCAPE ARCHITECTURE
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SHEET TITLE

Technical Specification

JOB NUMBER

10015

DATE 02/08/16 DRAWN BY DWD

REVISION

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SHEET NUMBER

S2