Pioneer Courthouse Square Renovation

SCHEMATIC DESIGN REPORT

14 MARCH 2016
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March 11th, 2016

Lauren McGuire, RLA
Capital Team Projects Manager
1120 SW Fifth Ave, Suite 1302
Portland, Oregon 97204

Subject: Schematic Design Report

Dear Lauren,

We are pleased to submit this Schematic Design Report, which represents a key milestone in our design process for Pioneer Courthouse Square. The information included in this report is meant to build on the Technical Investigation phase and therefore includes the content from previous reports and also serves as a tool that will evolve further as we enter Design Development. Moving forward, the work represented in this report will be integrated into our drawing sets and specifications.

At this stage of our process we are still exploring design ideas and project scope that will ultimately be a part of this renovation. As we learn more from additional technical investigation work with the broader team and CMGC moving forward and as we start to understand costs, many areas of the future work will either reduce in scope, or be defined as add alternates to be included in this phase of construction only as budget allows.

We appreciate all of the feedback and collaboration with the broader team to date and we are looking forward to the next stage of the work, where we can further define the opportunities and final design scope of this important renewal of Portland’s living room!

Thank you,

Jeff Yrazabal, AIA, LEED AP
Principal
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PROJECT SUMMARY
1.0 PROJECT TEAM

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PORTLAND PARKS & RECREATION

OWNER'S REPRESENTATIVE
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SRG PARTNERSHIP

LANDSCAPE ARCHITECT
WALKER MACY

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EQUILIBRIUM ENGINEERS, LLC

MECHANICAL ENGINEER
CUNDIFF ENGINEERING

ELECTRICAL ENGINEER
MLC ENGINEERING, LLC

CIVIL ENGINEER
CAPITAL ENGINEERING & CONSULTING, LLC

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PBS ENGINEERING + ENVIRONMENTAL

COST ESTIMATING
RIDER LEVETT BUCKNALL

TREE ASSESSMENT
THE PACIFIC RESOURCES GROUP

3D SCANNING
EPIC SCAN

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1.1 PROJECT SUMMARY

PROJECT DESCRIPTION
The Parks Replacement Bond was passed with the support of over 75% of voters in November 2014. Its primary focus is on repair and replacement of the most critical needs in the park system. The total bond is for $68 million, and $10 million of that has been allocated for the Pioneer Courthouse Square Project.

Pioneer Courthouse Square (PCS) is a 40,006 square foot block in the center of Downtown Portland bounded by SW 6th Ave. (east) SW Broadway Ave. (west), SW Morrison St. (north) and SW Yamhill St. (south).

The Project purpose is to renovate Pioneer Courthouse Square and make any other critical repairs and/or upgrade to protect and ensure the public’s safety, continued accessibility and enjoyment of the Square as bond funding allows.

The two primary goals for Pioneer Courthouse Square Project are to:

» Maintain and enhance the existing character of the Square to continue to address the needs of the Portland community and guests.

» Provide essential repairs and renovations to the Square’s infrastructure and facilities.

These repairs shall be determined based upon available budget. In order of relative priority they include:

1. Waterproofing
2. HVAC replacement
3. ADA repairs and upgrades
4. Stoa Column repairs
5. Restroom renovation
6. General Plaza Rehabilitation
7. Elevator upgrades
8. Other elements as bond funds allow

VISION
In addition to the pragmatic upgrade needs of the Pioneer Courthouse Square Renovation project, this important moment in the Square’s history may present opportunities to add value with relatively low current investment. We are asking: How can we approach improvements with a master plan sensibility, to avoid episodic responses to solutions within this scope?

A Visioning Kickoff was held at SRG on December 16th 2016 to review the goals and mission of the project, and discover the various needs of many stakeholders of Portland’s “living room.” Attendees included representatives from SRG, Walker Macy, PP&R, Director Park, the PCS Board, and the PCS Events, Facilities, and Operations departments. The discussion was organized around the following agenda items:

» Goals and Aspirations
» “What IF?”
» Review of Priority List
» Events & Infrastructure
» Construction Phase
» Wrap Up

The takeaway notes from the visioning have been included in this report and can be found in Appendix A.
SCHEDULE SUMMARY

The Project work plan was finalized at the end of October, initiating the first phase of the project, Technical Investigation. This phase primarily included document review, site investigation, geotechnical analysis, and the production of a 3D survey of the Square. The Design Team has since reviewed the Owner’s Reference Report documentation which included construction drawings, site analysis reports, and scope priorities. In addition, the team has performed several site investigations and has begun documenting recommendations for completing the renovations.

With the submittal of this report, the Design Team will begin the Design Development phase. During this phase the CM/GC, Howard S. Wright, will be added to the Project Team. HSW will then facilitate with investigations that are critical to the success of the work.

Weekly Project team meetings have been established every Tuesday afternoon at SRG’s office overlooking the Square. Attending these meetings are representatives from Portland Parks & Recreation, Pioneer Courthouse Square, SOJ, SRG and HSW.

A detailed construction schedule will be produced by HSW and reviewed by PP&R, SOJ, SRG and PCS.
INVESTIGATIVE PHASE
2.0 TECHNICAL INVESTIGATION

The Design Team activity thus far has consisted of reviewing document archives, scope, budget, vision, site investigation-and collecting geotechnical and survey site data. Each discipline’s activities are summarized below.

GEOTECHNICAL ENGINEERING
PBS Environmental & Engineering drilled borings in two locations previously identified as potential void areas underneath the bricks at the northeast corner of the Square. The cored material consisted of non-engineered fill with a high amount of moisture near the surface. This is likely what gave the reading as a void in the previous analysis. Voids were not encountered in this investigation. It was recommended that the utility lines near the borings be video-scoped to identify potentially leaking pipes that may be adding water to the subsurface. In addition, the boring identified a degraded membrane beneath the bricks on the lower level.

3D SCANNING
Epic Scan completed their data collection in December, and delivered point cloud files and Virtual Site Access spherical imagery to SRG. SRG distributed that information to the Project Team. An animation visualizing the 3-Dimensional data was provided for project outreach and promotional use.

HAZARDOUS MATERIALS
Since the Square was completed in 1983 we are not anticipating that we will run into any hazardous materials such as asbestos or lead paint. Products containing these hazardous materials were banned in 1977 and 1978 respectively. PBS will have an inspector available and present during any selective demolition and/or destructive investigation and testing activities scheduled thereafter.

ARCHITECTURE
In addition to document review, site investigations, and Design Team coordination, SRG held a visioning session to define overall Project goals. We had many great comments from the visioning session and have been incorporating them into the prioritized work where it is most appropriate.

LANDSCAPE
In addition to their own site investigations, Walker Macy has reviewed the investigational reports provided by PP&R and has begun calling out areas that will require additional investigation by the CM/GC. These areas include but are not limited to:

- Tree planters along Broadway and Morrison will need to be investigated to determine if waterproofing and subsurface drainage is present.
- Various areas outlined in the Phase 1 Visual Assessment Summary (December 2, 2013) and the Waterproofing Evaluation (April 10, 2006) for exterior brick walls and pavers, specifically around Starbucks and the northwest corner of the site at Broadway and Morrison. It is anticipated that minor cracks in the slab are present and will need to be repaired in parallel with the waterproofing work.
- Exterior stone cladding at the water fountain is addressed in the Visual Assessment Report.
- All penetrations through the waterproof membrane, including catch basins, pergola column connections, etc., are recommended to be revised to current waterproofing standards.

The following are items that were addressed during site observation visits:

- Cracked bricks: Extensive cracking of the thin mortar set bricks are visible throughout the Square. Repair of these bricks is recommended and the extent of repairs as an initial task is suggested to verify associated costs.
- Jointing: Expansion joints or sealant materials including vertical joints at stairs, walls and amphitheater are visible failing or are not present. This allows for potential water intrusion into the paving material sub layer.
- Skylights: Leaking at the skylights is present according to the Waterproofing Evaluation. Skylights will be removed and replaced with a structural slab that will tie into the existing slab.
- Ponding: There are various areas where ponding of water is present. Additional investigation is required to determine scope of repair.

Walker Macy has begun cataloging typical and specific details to be produced during future phases. This will be a dynamic list and will likely grow as investigations are performed by the CM/GC.

- Typical brick wall details
- Typical brick step details at stairs and amphitheatre details
- Typical stramp/ ramp details
- Typical brick paver pattern details
- Typical expansion joint details, including slab expansion joints
- Light post / surface interface
- Pergola structure post / surface details
» Rain and trench drains and catch basin details
» Tree grate details
» Tree planter details, including potential drainage and irrigation at planter details
» Stoa column cladding details
» Stone cladding details

CIVIL ENGINEERING

Capital Engineering is reviewing potential City Bureau of Environmental Services (BES) requirements to consider during the documentation phase. They have investigated each catch basin and drain on site and have given recommendations on determining the existing capacity. Refer to the schematic design drawings in this report for the locations of each drain. Additional work suggestions include:

» All locations: The trench drains/basins should be surveyed to determine discharge pipe size and depth below the rim. PP&R shall T.V. inspect the discharge pipe to review pipe alignment, condition and downstream discharge location.

CIVIL ENGINEERING

Location 3: Review orientation and spacing of slots/openings to comply with direction of run off as well as accessibility standards.

Location 4: In addition to survey and T.V. inspection, design team may determine a more efficient option for draining the area collected by this drain, such as a surface-mounted drain body.

STRUCTURAL ENGINEERING

The priority and task list are currently in careful review by Equilibrium Engineers. They have outlined several areas, specifically along Yamhill, in the Tri-met vault, that are in need of inspection and coordination with the Contractor in order to determine the extent of repair required as well as how to keep the area operational during repair. Refer to the schematic design drawings within this report for the locations of structural action items.

MECHANICAL ENGINEERING

Cundiff Engineering has performed several site investigations and reviewed record documentation to make the following recommendations:

» Replace or refurbish the existing exhaust fan located within the Tri-Met vault.

» Refurbish five of the original PACE air handlers which serve offices and commercial spaces with heating, cooling and ventilation. Refurbishment would include cleaning fan wheels and air handler interior, new cooling coils, new refrigerant piping, premium efficiency motors for supply and return fans, new belts and, upon investigation, new bearings. In addition, all HVAC systems would be rebalanced. The five air handler units are shown in the drawings.

» Replace current outdoor air louvers at cooling tower with either lockable hinged louvers or an accessible filter wall in the mechanical room.

FIGURE 2.1 CORROSION OF PIPES AT COOLING TOWER
Replace refrigerant system: Each air handler is equipped with a water cooled compressor/condenser. The refrigeration system uses refrigerant R-22, which is obsolete. This will require a new refrigeration system including new compressor/condensers, new cooling coils, new interconnecting refrigerant piping, controls and valves.

Completely replace the condenser water system, including new cooling tower equipment, new condenser water pump, new piping, valves and controls.

Replace the HVAC control system with a new web-based Direct Digital Control (DDC) system in accordance with City of Portland Parks and Recreation specifications.

Remove and replace underground duct work for restroom modifications. Floor mounted toilets and urinals will be replaced with wall mounted fixtures. Branch waste, vent, hot and cold water piping will be removed and replaced.

**ELECTRICAL ENGINEERING**

MLC Engineering has begun creating an electrical plan that has a more accommodating layout for the various uses at the Square. These include:

Provide NEMA 200A, 120/208V, 3P, 4W plus ground, CAM cable connector at various locations along the Square shown on the schematic design drawings.

Provide new 20A GFCI receptacles at brick “benches” along SW Sixth.

Replace the 400A company switch and control with new 400A, 120/208V 3P, 4W distribution panel with main 400A/3P circuit breaker and (4) 200A/3P branch breaker in the equipment room.

Pioneer Square is well lit and complies with code requirements for lighting. There is currently a mix of different lighting fixtures with different lamp sources and MLC provided the following three alternates:

Replace (36) single head MR16 fixtures, (10) double head MR16 fixtures and (2) incandescent cylinder downlights with LED type at trellis and exterior of Starbucks.

Retrofit (27) 35W high pressure steplights with LED lamps / drivers.

Replace (20) 500W quartz floodlights with (10) LED floodlights on mast pole at SW Broadway.
2.1 SCOPE EVALUATION

The following scope items are taken directly from the Project work plan, and are presented in the order of relative priority. This section describes the current status of each, and key questions the Design Team has identified for further exploration in the Schematic Design phase.

WATERPROOFING: MEMBRANE REPLACEMENT
HSW will be sending out an RFP for a waterproofing subcontractor in March or April. The subcontractor will advise and review the Design Team's documents and specifications. SRG will work collaboratively with both the waterproofing subcontractor and Walker Macy to preserve the existing character and brick detail.

WATERPROOFING: STRUCTURAL REMEDIATION
Equilibrium will require additional investigations performed by the Contractor to determine the exact extent of repair for the structure. This includes steel beams, concrete beams and any areas where shotcrete has been applied.

HVAC REPLACEMENT
Selected updates to equipment and controls will be analyzed and reviewed for priority and cost impact.

STOA COLUMN REPAIRS
Investigation with the CM/GC will help advise the type and scale of repair work necessary at the Stoa columns as the budget allows.

STOAO COLUMN REPAIRS
Investigation with the CM/GC will help advise the type and scale of repair work necessary at the Stoa columns as the budget allows.

RESTROOM RENOVATION
The priorities for the scope of work in both the men and women's restrooms are fixture replacements, ADA compliance, and general repairs. The heavy use that the facilities incur has been discussed, and other plumbing and layout upgrades are desired to increase functionality and safety.

ELEVATOR UPGRADES
The elevator upgrade scope is last on the priority list. If funds allow, it will be coordinated by HSW as design/build work. Upgrades would include the installation of a new elevator platform, flooring, cab walls, wiring, switches, and lower hoistway door and lock.

OTHER ELEMENTS AS BOND FUNDS ALLOW
The Visioning Kickoff began to identify potential items that could be incorporated into the scope with minimal cost. Since this Project is likely the most extensive intervention the Square will see in the next few decades, this is a rare opportunity to bring as much value to the park as possible.
2.2 SITE EVALUATION

TREES ASSESSMENT
Pacific Resources Group has noted that tree assessment is best done when full size leaves are on the trees, July through October, as foliage is an important indicator of tree health. However, a preliminary analysis of the street trees was performed in early March to determine root health. Their report is included in Appendix C.

Pacific Resource Group will work with Urban Forestry to determine permit requirements, potentially in a pre-application meeting with the City. See figure 2.1. A Project Tree Permit has been filed in order to have a City Arborist assigned.

PERMIT REQUIREMENTS
City of Portland Building Permit: A pre-application meeting is scheduled in early April. Key questions will include:

» Prior to selection of the design team it was determined that a building permit may be required, but a land use permit will not, provided the essential character of the Square is not altered. This will be verified at the pre-app meeting.

» What in the scope of this project triggers a building permit? Is it the ADA upgrades or structural improvements.

» What is the proper valuation of work for permitting?

BES Stormwater Management: We assume any work performed on the pedestrian area, will not require water quality/treatment measures, only catchment and conveyance to the existing public system as the Square was developed years ago.

Urban Forestry: at the time of the pre-app meeting we will have a preliminary tree assessment. PP&R has noted that Urban Forestry has a special form that PBOT is creating that will make their tree assessment determination much quicker, and requires utilizing it for the permitting process.

TriMet: Review project schedule. The contractor will need to obtain right-of-way and utility crossing permits as necessary.

PBOT: Review project schedule. The contractor will need to obtain street and sidewalk closure permits as necessary.
ADJACENT LAND PLANS
Preliminary research did not reveal any adjacent land use plans that would affect the scope of work. This will be verified at the City permit pre-application meeting. It is the Project Team and Project Advisory Committee’s roles to keep the adjacent neighbors appraised of the work with respect to the proposed construction.

SUSTAINABLE DESIGN OPPORTUNITIES
The Project may be a candidate for LEED O&M for Existing Buildings at the Silver Certification level. The nature of the certification is based on ongoing Operations and Maintenance standards and procedures, as well as thorough investigation of existing conditions, like this project could initiate. Overall, the pursuance of LEED O&M certification will be determined by the PP&R director and Parks Commissioner.

Energy Trust of Oregon funding opportunities for HVAC and lighting upgrades are being pursued by PP&R and will be supported by the Design Team as needed.

SECURITY AND SAFETY
A Public Involvement Plan is being developed by Pioneer Courthouse Square with input from PP&R and the project team. The following agencies are included in the plan as key contacts:

» Office of Neighborhood Involvement (ONI), Portland Downtown Neighborhood Association:
» Portland Police
» Pacific Patrol Services
» Portland Patrol, Inc.
» Portland Park Rangers
» Portland Mall Management, Inc.
SCHEMATIC DESIGN DOCUMENTS
Pioneer Courthouse Square Renovation

Portland Parks and Recreation
1120 SW Fifth Avenue, Suite 1302
Portland, OR 97204

Schematic Design
Issue Date: 11 March 2015
Project Number: 215027
CONSTRUCTION NOTES

1. EXISTING PLAZA CATCH BASIN AND/OR TRENCH DRAIN TO BE SURVEYED TO DETERMINE DISCHARGE PIPE SIZE AND DEPTH BELOW THE RIM. PORTLAND PARKS AND RECREATION SHALL T.V. INSPECT THE DISCHARGE PIPE TO REVIEW PIPE ALIGNMENT, CONDITION AND DOWNSTREAM DISCHARGE LOCATION.

2. EXISTING "STRAMP" TRENCH DRAIN TO BE SURVEYED TO DETERMINE DISCHARGE PIPE SIZE AND DEPTH BELOW THE RIM. PORTLAND PARKS AND RECREATION SHALL T.V. INSPECT THE DISCHARGE PIPE TO REVIEW PIPE ALIGNMENT, CONDITION AND DOWNSTREAM DISCHARGE LOCATION.

3. EXISTING ARCHED TRENCH DRAIN TO BE SURVEYED TO DETERMINE DISCHARGE PIPE SIZE AND DEPTH BELOW THE RIM. PORTLAND PARKS AND RECREATION SHALL T.V. INSPECT THE DISCHARGE PIPE TO REVIEW PIPE ALIGNMENT, CONDITION AND DOWNSTREAM DISCHARGE LOCATION.


4. EXISTING, GRATED WALL DRAIN, LOCATED IN THE NORTH AND SOUTH-FACING VERTICAL SURFACE OF THE BRICK WALL. THE DRAIN IS TO BE INSPECTED TO DETERMINE LOCATION, DEPTH AND SIZE OF THE DISCHARGE PIPE. PORTLAND PARKS AND RECREATION SHALL T.V. INSPECT THE DISCHARGE PIPES TO REVIEW PIPE ALIGNMENT, CONDITION AND DOWNSTREAM DISCHARGE LOCATION.

NOTE: BASIN AND GRATE SHALL BE CLEANED AND FLUSHED. DESIGN TEAM MAY DETERMINE A BETTER OPTION OF DRAINING THE AREA COLLECTED BY THIS DRAIN, SUCH AS A SURFACE-MOUNTED DRAIN BODY, WILL BE NECESSARY.

5. TRI-MET ENTRANCE TRENCH DRAIN, FLOODS DURING HEAVY RAINS. THIS DRAIN TO BE SURVEYED TO DETERMINE DISCHARGE PIPE SIZE AND DEPTH BELOW THE RIM. PORTLAND PARKS AND RECREATION SHALL T.V. INSPECT THE DISCHARGE PIPE TO REVIEW PIPE ALIGNMENT, CONDITION AND DOWNSTREAM DISCHARGE LOCATION.

1. Contractor to verify existing conditions and obtain approval of any discrepancies prior to start of construction.
2. Tank and pipe header areas managed by demolition work.
3. Structural and landscape drawings to confirm minimum COF of 0.8.
4. Contractor to perform slip resistance test in accordance with TCNA/ANSI 137.1.
5. Contractor to perform slip resistance test in accordance with TCNA/ANSI 137.1 to confirm minimum COF of 0.8.
6. Contractor to install handrail to extend 12" at top and bottom of ramp at both sides.
7. Contractor to verify condition of freight elevator including platform, cab, walls, hoistway door, lock, wiring and switches.
8. Redirect illuminated exit sign to point towards lobby exit.

For Reference Only

A201
LOWER LEVEL PLAN

PORTLAND PARKS & RECREATION

AMANDA FRITZ, Commissioner
Mike Abbate, Director of Parks, Portland Parks and Recreation
1. Remove and replace terra cotta tile on stoa columns bases to match existing.

2. Remove stone veneer and apply waterproofing as req'd, install with new stone veneer.

3. Extent of waterproofing, noted by hatch, see landscape for additional info.

4. Extend handrail to 12" beyond last riser.

5. Remove existing waterproofing at base of pergola columns. Cap base of column so that water cannot enter waterproof membrane, see structural and landscaping for additional info.

6. Contractor to verify existing conditions and inform architect of any discrepancies prior to start of construction.

7. Patch and paint finished areas damaged by demolition work.

8. All dimensions are to face of stud, face of concrete and centerline of door, UNO.

9. Protect existing terrazzo floors that are not included in work.

10. Confirm minimum clearances for shaft walls with mechanical drawings prior to construction of the shaft walls.

11. Refer to landscape drawings for waterproofing information.

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503 222 1917
PORTLAND, OR 97205
621 SW MORRISON, SUITE 200

SCALE:
DRAWN BY:
SECTION:
PROJECT MANAGER: Lauren McGuire

Portland, Oregon
AMANDA FRITZ, Commissioner
Portland Parks and Recreation
Mike Abbate, Director of
DATE:
PIONEER COURTHOUSE SQUARE
REVISIONS
For Reference Only
A202
UPPER LEVEL PLAN
SITE PLAN
1" = 10'-0" A202
MEN'S / WOMEN'S RESTROOM - DEMO PLAN

MEN'S / WOMEN'S RESTROOM

Remove existing urinal
Remove existing toilet and tank, typ
Remove existing floor mounted toilet

SST urinal, typ
SST wall mounted toilet w/ clean out hook, typ
Solid surface counter w/ undermounted SST sinks
SST bi-lateral drinking fountain

Floor to ceiling anchored, phenolic color thru toilet and urinal partitions w/ SST hardware

Remove existing urinal and toilet partitions
Remove existing urinals
Remove existing floor mounted toilets
Remove existing wall, typ
Remove existing door and frame
Remove existing counter and lavs
Remove existing drinking fountains

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621 SW MORRISON, SUITE 200

PROJECT MANAGER: Lauren McGuire

AMANDA FRITZ, Commissioner
Portland Parks and Recreation

Mike Abbate, Director

PORTLAND, Oregon

DATE:

REVISIONS
For Reference Only

JAK
11 March 2016
A301

RESTROOM PLANS AND ELEVATIONS
APPENDIX A: VISIONING
- Amphitheater: events turn back to it. ?? Utilized, special?

- SW corner flexibility
- Power @ SW corner too.
- Act ADA entrance / variety of uses around paths.
- Anchors for standard tent layouts: saves time/cost
- Water mgmt @ stoa col @ SW corner: power route??
- # of standard layouts - cost/time/safety
- SW Corner
  - Flexibility
- Security Fence
  - Durable, Tamper Proof
  - Attractive
- Signage / Installation Ideas:
  - 1/1 Time
- Open up G-2 even more? (Benefits)

AHA's PCS Vision

- 33,000/mo Restrooms
- Program Evaluation Interior
- SDC: A Funding Source
  - FOR MORE INFO?
- ASPIRATIONAL LIST!
**EVENTS / PATTERNS**

- 60° AUE KEY/MAIN ENTRANCE
  - AFFECTS TENT SIZE/LAYOUT

- 1 SOURCE POTABLE WATER
  - LIMITED POWER

- INFRASTRUCTURE NODE

- NEED FOR FLEXIBILITY/VARIETY
  - WITH LAYOUTS

- LOADING ONLY @ 60° LIMITING
  - NO ACCESS TO TEMP STORAGE

- TRUCK INGRESS/EGRESS?

- NO SEWAGE, GREY WATER DUMP
  - SEWER CONNECTION?

- AMPLIFIER/REVERB - EVENTS TEND BACK TO IT
  - ?? UTILIZED, SPECIAL?

- SW CORNER FLEXIBILITY

- POWER @ SW CORNER TOO

- ACT ADA ENTRANCE/VARIETY OF LBS AROUND PATHS
- SW CORNER FLEXIBILITY
- POWER @ SW CORNER TOO
- ACT ADA ENTRANCE / VARIETY OF USES AROUND PATHS
- ANCHORS FOR STANDARD TENT LAYOUTS: SAVES TIME/COST
- WATER MGMT @ STOA COL @ SW CORNER: POWER ROUTE ??
- # OF STANDARD LAYOUTS - COST/TIME/SAFETY
- Bollards need replacement
- Security fence

\[\text{Access}\]

- Art stage
- Power / flexibility
- Food carts
- Integrate w/ events?
- Common utility / water, etc.
DEFINE SUCCESS

- Better square, not a diff so. Preserve "culture"/char.
- Improve functionality
- On time - Calendar critical (events)
- Bathrooms - Improve public safety.
- Happy tenants!!
- Minimal impact on tenants during const. (revenue?)
- Messaging opportunity during const.
- Inclusivity (family, gender, etc)
- Design for maint. - Maintainable, repairable
- Better integration of components - access, security - better design? Easy, more attr.
- Evaluate area for art uses/stor. (appraised)
- Flexible elements like benches, other
- Flexibility for square during const.
- Organization of program below, evolution of use
- Better more flexible access to still now & future
- Drop off, loading ease/safety
- Alcohol @ Starbucks - Reg's?
- Food carts, better design - mobility?
- Enhanced security services.
PCS of the Future
(GOALS : ASPIRATIONS)

KEYS TO SUCCESS (CONT)

(CAPACITY FOR GROWTH) CARTS
(UTIL)

- A RIVER DOES NOT FLOW THRU IT

- NOT JUST "FIXED SQUARE" BUT

  "THE NEXT GENERATION OF THE SQUARE"

- ROOFTOP ON 72ND: FOSTER
- TENT LAYOUTS, STANDARDS.
- TENSILE STRUCT. INST. OF TENTS?
- PRESERVE OR ENHANCE CAPACITY OF EVENTS.
- BETTER SIGNAGE OPPORTUNITIES / INTEGRATION.
- WIFI (PUBLIC)
- ACCESS TO TEMP SEATING: DIFFERENT TYPES
  - DURABLE, STURDY
  - ADA-FRIENDLY
APPENDIX B: PROJECT SCOPE ANALYSIS OF WESTERN ARCHITECTURAL’S 2013 VISUAL ASSESSMENT SUMMARY
<table>
<thead>
<tr>
<th>Section Item</th>
<th>Description</th>
<th>Bond Scope</th>
<th>CMGC analysis req.</th>
<th>Responsible Parties</th>
<th>Date Initiated</th>
<th>Date Completed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.0-1.1.3</td>
<td>Brick veneer walls around upper level patio: Examine drainage or protection from moisture between CMU wythes. Examine flashing above wall openings. Properly detail flashing transitions between horizontal and vertical surfaces.</td>
<td>X</td>
<td>X</td>
<td>SRG Walker Macy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.4</td>
<td>Examine bearing conditions at the bottom of the brick veneer at the storage room double doors. Determine if existing sawcut at the concrete beam is structurally compromising.</td>
<td>X</td>
<td>X</td>
<td>Equilibrium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.0-1.2.3</td>
<td>Thin stone cladding on entry water cascade and trough on brick veneer walls. Re-detail with industry standard sealant joints, drainage strategies, and seismically acceptable attachments</td>
<td>X</td>
<td>X</td>
<td>SRG Walker Macy Equilibrium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.4</td>
<td>Recommend short term repairs for soffit panels above the entrance doors</td>
<td>X</td>
<td>X</td>
<td>SRG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.0-2.1.3</td>
<td>Upper level aluminum storefront: Examine sealants, gaskets, fasteners and other essential water resistance elements.</td>
<td>X</td>
<td>X</td>
<td>SRG Walker Macy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.4</td>
<td>Coordinate waterproofing continuity at exterior wall and plaza membrane</td>
<td>X</td>
<td></td>
<td>SRG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.4</td>
<td>Consider screening rooftop mechanical equipment</td>
<td>n/a</td>
<td>n/a</td>
<td>Not in scope</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.0-2.2.2</td>
<td>Examine condition of vent at top of penthouse at Yamhill and Broadway</td>
<td>X</td>
<td>X</td>
<td>SRG Parks Cundiff</td>
<td>1/14/2016</td>
<td>lift to exterior, photos from interior</td>
<td></td>
</tr>
<tr>
<td>2.2.3</td>
<td>Examine condition of vent at top of the Morrison/Broadway Stoa column with borescope through existing pipe. Consider repair, replacement, or reconfiguration of exhaust vent.</td>
<td>X</td>
<td></td>
<td>Parks Cundiff</td>
<td></td>
<td>video scope and lift</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Task Description</td>
<td>Done By</td>
<td>Due Date</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-----------------</td>
<td>---------</td>
<td>----------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.4</td>
<td>Determine condition and function of the vent at the Yamhill/Broadway Stoa column. Consider repair, replacement, or reconfiguration</td>
<td>X Parks</td>
<td>X Cundiff</td>
<td>X video scope and lift</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.5</td>
<td>Determine condition of TriMet vault vents</td>
<td>X Cundiff</td>
<td>1/14/2016</td>
<td>X Cundiff to examine</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.0.0 Lower Level Roof System and Structural Frame

#### 3.1.0-3.1.3 Plaza Membrane/Lower level roof system:
- Provide properly detailed WRB transitions from horizontal to vertical surfaces. | X X SRG Walker Macy |

#### 3.1.4 Examine and evaluate Stoa Column repair strategies | X X SRG Walker Macy |
- Only Stoa columns in the area to be waterproofed |

#### 3.1.4 (2) Include sealing concrete structure at cold joints under new WRB in details | X SRG Walker Macy |

#### 3.1.5 Remove and patch abandoned electrical receptacles, replace any temporary or insufficient panels and receptacles | X MLC |

#### 3.1.6 Examine and properly detail the under-sidewalk WRB at the abandoned Yamhill vault | X X SRG Walker Macy |
- Resolved |

#### 3.2.0-3.2.1 Lower Level Structural Frame: Structural evaluation of the electrical vault beneath Yamhill sidewalk. Examine vaulted sidewalk, steel beams, masonry wall, and vent penetrations to Broadway | X X & TriMet Equilibrium Cundiff |
- 1/14/2016 |

#### 3.2.2 Examine steel beams identified in S2 around terra cotta mechanical penthouse and along Broadway. Remove existing loose shotcrete covering as required. | X X Equilibrium |
- 1/14/2016 |

#### 3.2.3 Remove loose concrete and examine condition of steel reinforcing in the concrete beam in NW corner between storage room 100 and electrical room 106. Beam is severely spalled | X X Equilibrium |

#### 3.2.3 (2) Remove plywood to examine concrete spalling and extent of steel reinforcing corrosion in the concrete beam spanning the Stramp | X X Equilibrium |

#### 3.2.4 Examine void and debris fields discovered by Ground Penetrating Radar survey | X | 12/9/2015 | 1/4/2016 | Resolved |

#### 3.2.5 Resurvey "Point J" in the theatre to determine if movement can be detected beyond the initial settling reported 1 year after construction | X Equilibrium SOJ? |
- Tom provided a copy of details |

#### 3.2.6 Evaluate size of beam below the restaurant in the employee break room to determine if cracking is due to loading or shrinkage | X X Equilibrium |
### 4.0.0 Upper Level Restaurant

#### 4.0.1-4.0.3

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>X</th>
<th>SRG</th>
<th>Equilibrium</th>
<th>See 2.1.4, Line #13</th>
</tr>
</thead>
</table>

#### 4.1.0-4.1.1

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>X</th>
<th>SRG</th>
<th>Equilibrium</th>
<th>X X SRG</th>
</tr>
</thead>
</table>

#### 4.1.2

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>SRG</th>
</tr>
</thead>
</table>

#### 4.1.3

<table>
<thead>
<tr>
<th>Description</th>
<th>n/a</th>
<th>n/a</th>
<th>Not in scope</th>
</tr>
</thead>
</table>

### 5.0.0 Lower Level Retaining Walls and Floors

#### 5.1.0-5.1.2

<table>
<thead>
<tr>
<th>Description</th>
<th>n/a</th>
<th>n/a</th>
<th>Because mitigation of the water leaking is not feasible within the allocated bond funding, this analysis was not performed</th>
</tr>
</thead>
</table>

#### 5.1.3

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>Walker Macy Capital</th>
</tr>
</thead>
</table>

#### 5.1.4

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>X</th>
<th>Equilibrium SRG</th>
<th>1/14/2016</th>
</tr>
</thead>
</table>

#### 5.1.5

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>X</th>
<th>Equilibrium SRG</th>
<th>1/14/2016</th>
<th>See 2.2.5</th>
</tr>
</thead>
</table>

#### 5.2.1

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>X</th>
<th>SRG Cundiff</th>
<th>scope waste line</th>
</tr>
</thead>
</table>

#### 5.2.2

<table>
<thead>
<tr>
<th>Description</th>
<th>X</th>
<th>MLC</th>
</tr>
</thead>
</table>
APPENDIX C: TREE ASSESSMENT
## PRELIMINARY PIONEER SQUARE TREE ASSESSMENT

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Dia. Inches</th>
<th>Species</th>
<th>Approx. Crown Ht/Width</th>
<th>Health</th>
<th>Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19</td>
<td>Red Maple, Armstrong or similar</td>
<td>75 x 20</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Nearly full asymmetric crown due to crowding is off center to north. Below average annual twig growth.</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>Red Maple, Armstrong or similar</td>
<td>75 x 18</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Partial asymmetric crown due to crowding, is off center and heavy to north. Below average annual twig growth.</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>Red Maple, Armstrong or similar</td>
<td>75 x 22</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Nearly full asymmetric crown is off balance and heavy to north &amp; east. Below average annual twig growth.</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>Red Maple, Red Sunset or similar</td>
<td>55 x 20</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Partial crown due to crowding is off balance and heavy to west. Exposed and girdling roots at base have been damaged by foot traffic. Poor annual twig growth and some structural problems. Prune to improve structure.</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>Red Maple, Red Sunset or similar</td>
<td>55 x 25</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Nearly full asymmetric crown of off balance and heavy to north, south and west. Some exposed roots at base have been damaged by foot traffic. Below average annual twig growth. Prune to improve structure.</td>
</tr>
<tr>
<td>6</td>
<td>21</td>
<td>Red Maple species</td>
<td>75 x 42</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Nearly full asymmetric crown that is much wider that expected possibly due to past pruning or storm damage that has caused it to grow wider, particularly on the east and north sides. Below average annual twig growth. Steel grate supports showing as soil surface are bending and may be damaging roots below. Prune to improve structure and remove steel grate supports.</td>
</tr>
<tr>
<td>7</td>
<td>22</td>
<td>London Plane</td>
<td>65 x 47</td>
<td>Good</td>
<td>Few &amp; minor or correctable defects</td>
<td>Full symetric crown with average annual twig growth. Tree grate is lifting, creating a trip hazard and should be adjusted to make it flush with walkway.</td>
</tr>
<tr>
<td>8</td>
<td>19</td>
<td>London Plane</td>
<td>65 x 42</td>
<td>Good</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Partial crown due to crowding that is off balance to west. Good annual twig growth. Tree grate is lifted and should be adjusted to make it flush with walkway.</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>London Plane</td>
<td>60 x 38</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Full asymmetric crown is heavy to west. Below average annual twig growth. Prune to improve structure.</td>
</tr>
<tr>
<td>10</td>
<td>19</td>
<td>London Plane</td>
<td>70 x 38</td>
<td>Fair</td>
<td>Few &amp; minor or correctable defects</td>
<td>Full asymmetric crown due to crowding and is heavy over street. Good annual twig growth. Prune to balance and improve structure.</td>
</tr>
<tr>
<td>11</td>
<td>17</td>
<td>Red Maple, Armstrong or similar</td>
<td>75 x 18</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Full narrow asymmetric crown is heavy to south, east and west. Has a large dead limb on north side and below average annual twig growth. Prune to remove deadwood and improve structure.</td>
</tr>
<tr>
<td>12</td>
<td>16</td>
<td>Red Maple, Armstrong or similar</td>
<td>75 x 18</td>
<td>Fair to Poor</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Partial asymmetric crown due to crowding, is off center and heavy to east. Very poor annual twig growth. Has some deadwood. Evaluate health when fully leafed out.</td>
</tr>
</tbody>
</table>
## PRELIMINARY PIONEER SQUARE TREE ASSESSMENT

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Dia. Inches</th>
<th>Species</th>
<th>Approx. Crown Ht/Width</th>
<th>Health</th>
<th>Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>21</td>
<td>Red Maple, Armstrong or similar</td>
<td>75 x 30</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Full symetric crown with below average annual twig growth. Some exposed roots at base damaged by foot traffic.</td>
</tr>
<tr>
<td>14</td>
<td>7</td>
<td>Red Maple, Armstrong or similar</td>
<td>50 x 10</td>
<td>Fair</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Full crown with 2 stems at 6' and included bark. Codominant stems at 8’. Prune to improve structure.</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
<td>Norway Maple, Deborah or similar</td>
<td>55 x 25</td>
<td>Fair</td>
<td>Few &amp; minor or correctable defects</td>
<td>Full crown is slightly off balance to east. Below average annual twig growth. Tree grate is cutting into trunk on southwest side. Remove portion of grate that is damaging tree.</td>
</tr>
<tr>
<td>16</td>
<td>6</td>
<td>Norway Maple, Deborah or similar</td>
<td>30 x 18</td>
<td>Poor</td>
<td>Few &amp; minor or correctable defects</td>
<td>Full asymmetric crown with below average annual twig growth. Prune to improve structure. May improve with care.</td>
</tr>
<tr>
<td>17</td>
<td>4</td>
<td>Norway Maple, Deborah or similar</td>
<td>15 x 13</td>
<td>Poor</td>
<td>Moderate &amp; non-correctable defects</td>
<td>Very thin crown with below average annual twig growth. Prune to improve structure. May improve with care.</td>
</tr>
<tr>
<td>18</td>
<td>2.5 3.5 Cal</td>
<td>Norway Maple, Deborah or similar</td>
<td>15 x 13</td>
<td>Fair</td>
<td>Few &amp; minor or correctable defects</td>
<td>Thin crown with good annual twig growth. Prune to improve structure and improve care to improve health.</td>
</tr>
<tr>
<td>19</td>
<td>13</td>
<td>Red Maple species</td>
<td>75 x 30</td>
<td>Good</td>
<td>Few &amp; minor or correctable defects</td>
<td>Dense full crown with below average annual twig growth. Some exposed roots at base should be protected from damage. Prune to improve structure.</td>
</tr>
<tr>
<td>20</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
<tr>
<td>21</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
<tr>
<td>22</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
<tr>
<td>23</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
<tr>
<td>24</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
<tr>
<td>25</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
<tr>
<td>26</td>
<td>1 Cal</td>
<td>Crape Myrtle</td>
<td>6 x 3</td>
<td>Fair</td>
<td>Sound, no obvious defects.</td>
<td>Newly planted in above ground large decorative pot. Prune to improve structure and assess after leaf out in late May.</td>
</tr>
</tbody>
</table>

Note: Leaf size is a reliable indicator of tree health so a follow up assessment should be made when the trees are fully leafed out in early summer.
5.0 REFERENCE DOCUMENTS

PROJECT DOCUMENTS

PIONEER COURTHOUSE SQUARE REPAIR PRIORITIES LIST
PP&R AND PCS
OCTOBER 27, 2015

PCS RENOVATION PROJECT PREVIOUSLY IDENTIFIED ISSUES TO BE FURTHER EVALUATED
PP&R AND SOJ
NOVEMBER 17, 2015

GEOTECHNICAL EVALUATION REPORT
PBS ENGINEERING + ENVIRONMENTAL
JANUARY 4, 2016

3D SCAN, POINT CLOUD AND VIRTUAL SITE ACCESS
EPIC SCAN
DECEMBER 22, 2015

RESOURCE DOCUMENTS

RFP EXHIBIT B: PCS 2015 RENOVATION & REPAIR PROJECT ITEM
PP&R AND PCS
APRIL 30, 2015

RFP EXHIBIT C: PCS PHASE 1 VISUAL ASSESSMENT SUMMARY

RFP EXHIBIT D: APPENDIX A - PHOTOGRAPHS

RFP EXHIBIT E: APPENDIX B - ANNOTATED DRAWINGS
WESTERN ARCHITECTURAL FORENSIC AND HAYDEN CONSULTING ENGINEERS
DECEMBER 2, 2013

RFP EXHIBIT F: GROUND PENETRATING RADAR REPORT
KLEINFELDER
OCTOBER 15, 2013

RFP EXHIBIT G: VIBRATION MONITORING REPORT
EARTH DYNAMICS
NOVEMBER 13, 2013

ADA REVIEW REPORT P&R-413: PIONEER COURTHOUSE SQUARE
ESTIMATED DATE = 2014

PCS SURFACE ASSESSMENT - EXHIBIT A
PIONEER COURTHOUSE SQUARE
ESTIMATED DATE = 2011

PCS WATERPROOFING EVALUATION PROFESSIONAL ROOF CONSULTANTS
APRIL 10, 2006

ENB-9.02 GREEN BUILDING POLICY
CITY OF PORTLAND OFFICE OF THE CITY AUDITOR
APRIL 22, 2015